Psychology
Developmental Psychology
Intermediate 1 and 2

6544

SHOUT
SHARE
IT

Spring 2000

HIGHER STILL

Psychology

Developmental Psychology

Intermediate 1 and 2

Support Materials

CONTENTS

Statement of standards
Intermediate 1
Intermediate 2

Introduction
Integration with other units
Unit content

Guidance for teachers/lecturers
Approaches to learning and teaching
Learning environment
How to use this pack
Recording student attainment

Student information and activities

OUTCOME 1
Introduction: What is developmental psychology

Lifespan development (compulsory)
Information: Introduction
The pre-natal stage
Infancy
Childhood
Sociability
Theory of maternal deprivation
Social and emotional development
Summary
Glossary

Student activities for life span development

Concept 2: Cognitive development
Information: Introduction
Piaget's Theory of Cognitive Development in Children
Challenges to Piaget
Cognitive Social Learning Theory
Summary
Glossary

Student activities for cognitive development

Concept 3: Adolescence and adulthood
Introduction
Adolescence: Development
Adolescence: Summary
Adulthood
Summary
Glossary

Student activities for adolescence and adulthood

OUTCOME 2
Information

Research methods in developmental psychology: Introduction
The experiment
The survey
The interview
Observation
The case study

Student activities

General references

STATEMENT OF STANDARDS

Developmental Psychology (Intermediate 1)

Outcome 1

Describe, in brief, key concepts in developmental psychology.

Performance criteria

(a) Key concepts in developmental psychology are identified correctly.
(b) Key concepts in developmental psychology are described simply and accurately.
(c) The applications of these key concepts to different situations in everyday life are described simply and accurately.

Evidence requirements

To demonstrate satisfactory attainment of this outcome, candidates should produce written or oral responses to cover all performance criteria. They are required to do so for **three** key concepts: the compulsory key concept of life span development and **two** from attachment and separation, cognitive development, social and moral development, adolescence and adulthood, ageing.

Written/oral responses will typically be short answers and restricted responses to specific questions.

Outcome 2

Describe, in brief, the main research methods used in developmental psychology.

Performance criteria

(a) The main research methods used in developmental psychology are identified correctly.
(b) The main research methods used in developmental psychology are described simply and accurately.
(c) Examples of research used in developmental psychology are described simply and accurately.

Evidence requirements

To demonstrate satisfactory attainment of this outcome, candidates should produce written or oral responses to cover all performance criteria. They are required to do so for **two** of the following methods of research: experimental, survey, interview, observation, case study. Candidates should give **two** examples of research for each method.

Written/oral responses will typically be short answers and restricted responses to specific questions.

Developmental Psychology (Intermediate 2)

Outcome 1

Describe key concepts in developmental psychology.

Performance criteria

(a) Key concepts in developmental psychology are described accurately.
(b) The applications of these key concepts to different situations in everyday life are described accurately.

Evidence requirements

To demonstrate satisfactory attainment of this outcome, candidates should produce written or oral responses to cover all performance criteria. They are required to do so for **three** key concepts: life span development and **two** from attachment and separation, cognitive development, social and moral development, adolescence and adulthood, ageing.

Written/oral responses will typically be short answers and restricted responses to specific questions.

Outcome 2

Describe the main research methods used in developmental psychology.

Performance criteria

(a) The main research methods used in developmental psychology are described accurately.
(b) Examples of research used in developmental psychology are described accurately.

Evidence requirements

To demonstrate satisfactory attainment of this outcome, candidates should produce written or oral responses to cover all performance criteria. They are required to do so for **two** of the following methods of research: experimental, survey, interview, observation, case study. Candidates should give **two** examples of research for ***each*** of the two methods chosen.

Written/oral responses will typically be short answers and restricted responses to specific questions.

INTRODUCTION

Integration with other units

Developmental Psychology is an optional unit of Intermediate 1 and Intermediate 2 Psychology. The 'Developmental Psychology' units have close links with the introductory units in the Intermediate Psychology courses. They may be integrated effectively with the introductory units. The range of psychological key concepts, applications of these key concepts to different situations in everyday life and research methods covered in these optional units are directly, and indirectly, relevant to the approaches and research methods covered in each introductory unit.

Developmental Psychology can be offered as a free-standing unit at both Intermediate 1 and Intermediate 2.

Unit content

Both the Intermediate 1 and Intermediate 2 'Developmental Psychology' units have two outcomes:

INTERMEDIATE 1	INTERMEDIATE 2
Outcome 1 Describe, in brief, key concepts in developmental psychology.	Outcome 1 Describe key concepts in development psychology.
Outcome 2 Describe, in brief, the main research methods used in development psychology.	Outcome 2 Describe the main research methods used in development psychology.

The content of these units is similar across the two levels. They can be summarised as follows:

- key concepts: life span development, attachment and separation, cognitive development, social and moral development, adolescence and adulthood, ageing in developmental psychology
- applications of these key concepts to different situations in everyday life
- the main methods of research used in developmental psychology: experimental, survey, interview, observation, case study
- examples of research in developmental psychology which uses these methods.

For further information and details about unit content, please refer to the Psychology Arrangements document.

GUIDANCE FOR TEACHERS/LECTURERS

Approaches to learning and teaching

In delivering these units, it is useful if teachers/lecturers achieve a balance between teacher/lecturer exposition and experiential learning. It is important to recognise that learners acquire and process information in a number of ways to help them learn. These include visually, aurally, in discussion or exchange with others, during group based problem solving activities, and during solitary reflection.

Students should be encouraged from the beginning to draw on their own experiences, perceptions, and their previous and current learning. Personal experience of interacting with a variety of people, and in a number of different situations is an invaluable source of knowledge and is highly relevant to developmental psychology. The sharing of experiences and insights will promote general awareness that developmental psychology assists self-understanding and an understanding of humans in a variety of contexts.

Students should also be encouraged to gather and use information about different people's actions, thoughts and feelings and to consider how these affect themselves and others. Relevant quality newspapers and/or magazine articles and video/film productions are useful resources which bring developmental psychology to life so that it can be shared by comparatively large groups of people at any one time. This remains appropriate even when the material is fictional, provided it presents us with a true picture of the human condition which is not deliberately sensationalised.

In delivering this unit it is appropriate that a multicultural approach is taken since the learning needs of individuals vary according to their cultural background. Case studies, role-play and simulations should incorporate characters and elements from different social and cultural backgrounds wherever possible.

Unit induction

At the beginning of the unit 'Developmental Psychology', teachers and lecturers should ensure that students are clear about its nature and purpose. Induction for this unit should last about two hours and should include an introduction to the content of the unit, provide a programme of work and explain the arrangements for assessment and reassessment. At this point students can be given the Candidates' Guide from the Unit Assessment Pack. This helps explain what the unit is about and how it is assessed.

In order to allow students to make a confident start, reference should be made to links with previous or other current learning with which they are familiar. It is also important to discuss and explore the nature of the course or group award being undertaken by the group.

It may be necessary to include induction exercises, particularly if the group is a new one. The type and number of exercises used will however depend on the nature of the particular group, their familiarity with each other and with the teacher/lecturer concerned.

Learning environment

The expertise of the teacher/lecturer is invaluable in developing skills in, approaches to, and insights about the subject of developmental psychology. Teachers/lecturers should aim to create a relaxed and enjoyable learning environment, which is both motivating and supportive.

In order that a 'people' perspective is always present the following conditions should be met:

- the provision of a learning climate in which students feel supported and able to express their thoughts and ideas
- a teaching style which promotes a supportive learning climate
- teaching and learning methods which draw on students' past and present learning experience and which enable them to integrate new ideas and skills during their interactions with others.

Further guidance can be found in the Psychology Subject Guide.

How to use this pack

Purpose of the pack

This pack is designed to provide guidance and support materials to help teachers/ lecturers in the delivery of the unit. The student information and activities are designed to be used by teachers/lecturers in whatever way suits their preferred style of delivery and the needs of their particular student group.

This pack has not been designed for open learning purposes. Answers to exercises and worksheets will be provided and facilitated by the teacher/lecturer. The student activities in the pack will require to be followed up and brought together by the teacher/lecturer in whatever way is most appropriate.

The student activities in this pack cover the two learning outcomes and their performance criteria at both Intermediate 1 and Intermediate 2. The material is presented in such a way that Outcome 1 (Key concepts) is covered first. Outcome 2 (Research methods) is then covered. This sequence of delivery is by no means compulsory and may be rearranged at the discretion of the teacher/lecturer responsible for delivering the unit.

Using the materials

The student activity and information materials in the pack have been identified as either:

- **Information**
  or
- **Student activity.**

The essential knowledge required for the unit has been covered on those pages that have headed **Information**. This is particularly useful as handout material. These information sheets could also be used as the focus of input by the teacher/lecturer and to develop ideas further as part of question and answer sessions and group discussions.

These information sheets can be photocopied as a separate pack should the teacher/lecturer prefer to use them either as teaching notes or as separate handout materials. Alternatively, the materials could be assembled into smaller topic packs.

All worksheets, assignments, exercises and group activities have been covered on those pages which are headed **Student activity**. These general activities have been developed to include exercises for individuals, pairs, triads and small groups to conduct. Teachers/lecturers may well wish to adapt the way in which these activities are carried out according to the needs of their particular group.

Recording student attainment

A recording proforma for teachers/lecturers to complete for individual candidate attainment is available in the Unit Assessment pack.

Two further proformas can be found in the Appendix of this pack:

- Candidate's record of progress - for individual candidates to have a record of their attainment
- Internal assessment record - to record the internal assessment results of the whole student group.

Teachers/lecturers may devise their own alternative system for recording student attainment.

STUDENT INFORMATION AND ACTIVITIES

OUTCOME 1

For this outcome you will learn about the following three developmental psychology key concepts:

- life span development (compulsory concept)
- cognitive development
- adolescence and adulthood.

By the end of this outcome you should know and understand what each one of these key concepts involves and be able to describe it. You should also know the names of some of the famous developmental psychologists associated within each key concept. Finally, it is expected that you will be able to recognise and state how each key concept is applied in different situations in everyday life.

For the purposes of the Intermediate 1/2 Developmental Psychology compulsory key concept *Lifespan Development,* SQA particularly emphasise:

- sequences in development - stage and non-stage approaches
- maturation, physical growth and related aspects of development
- critical/sensitive periods in development.

Introduction: What *is* 'Developmental Psychology'?

Developmental psychology is the branch within our subject that concerns itself with the different changes which happen to us as individuals from pre-birth to death and what the causes and effects of these changes might mean for us. These **changes**, *which occur at different ages throughout our lifetime*, are **continuous and progressive** and fall into the following four categories:

- **physical**
- **cognitive** or intellectual
- **social**, and
- **emotional.**

Physical development concerns the development of our body's **anatomy** (bodily structure), and **physiology** (bodily processes) during the course of our life and how these developments help or hinder how we think and how we behave, socially and emotionally, as we age. We all develop physically at approximately the same age the world over, though the onset of physical change may vary slightly from one person to another.

Cognitive development concerns perception, attention, language, memory and thinking (or problem solving). Collectively these are called our **cognitive processes**. Investigations into cognitive development in developmental psychology almost exclusively concern the growth and development of thinking ability.

Social development is enquiry into how we develop as social beings and looks at **socialisation**, **sociability**, child-rearing practices, moral development, groups and **peer group** influences etc.

Emotional development, which is closely related to social development, concerns concepts like the nature of the **attachments** we form with others, our temperament, our personality, what motivates us to aggression, identity and our search for meaning in life.

The study of these continuing and progressive changes that occur to us during our lifetime is known as lifespan development or the **life-span approach**. Developmental psychology's *lifespan approach* is different from other 'approaches' in psychology – like behaviourism or psychoanalysis – in that *it does not favour any particular psychological theory*, or theorist, but does make a number of assumptions concerning our development. These assumptions are that:

- biological **maturation,** which is determined by our **genetics**, must occur before physical and ultimately cognitive, social and emotional growth and development happens for us as individuals
- human beings the world over experience the same **sequence of** physical, cognitive, social and emotional **development** throughout their lifespan
- as we develop physically, cognitively, socially and emotionally these age-related changes are shaped, for better or for worse, by the **environment** within which we find ourselves.

Setting the scene

Developmental psychology studies, in the main, the various skills and abilities human beings have, including, how we acquire them in the first place. Human beings are very complex animals, thus the first important influence on our development is our **biology**. As mankind, in the generic *or* non-specific sense, has evolved, biology has affected behaviour in a number of ways. Great discoveries were made in biology in Europe during the 19th century, and as a result some psychologists began to argue that many of our skills, such as intelligence, were genetically determined in much the same way as our sex, skin pigmentation or colour of our eyes. Psychologists who take this view would be said to be influenced by the **nature perspective** (*our biology or genetics control and shape what we become physically, cognitively, socially and emotionally*).

Others disagreed, arguing that each of us, physically (and to a greater extent, cognitively, socially and emotionally) is the product of all the experiences encountered as we grow up. Our environment makes us what we are. Over and above this they would argue that because we have **free will**, we can, if *we* want change aspects of what we have become. We can, for example, change how we think about and view the world, and this can have an influence on our social and emotional behaviour as individuals and with others. Psychologists who believe environment is more influential in shaping us psychologically would be said to be taking a **nurture perspective** (*our environment controls and shapes what we become physically, cognitively, socially and emotionally*).

The nature-nurture debate

The '*normal*' human baby inherits 23 *pairs* of **chromosomes** from their male and female biological parents. It is estimated that each chromosome probably contains between 10 000 to 20 000 **genes**. A gene carries information in the form of

deoxyribonucleic acid - DNA - to the developing organism, known as a **foetus**. A baby's, and ultimately an adult's, **genetic inheritance** is a mixture of our parents genes and is called our **genotype**. A genotype is a sort of blueprint or plan of what we will be like as we develop and grow. Many early psychologists thought that most of our personality, intellect, sex role behaviour, etc. was the result of our genes and could not be interfered with or changed in any constructive way. This is quite a frightening thought. It means that we have no free will and need not feel responsible, or be held accountable, for our actions.

Nowadays we know this early view was quite wrong. We do not always achieve the prediction of our genotype anyway. You cannot predict with any certainty on the basis of genetic inheritance alone what we might become as human beings. Environment, and its influence on physical, cognitive, social and emotional development affects us from conception. If, for example, our mother had a certain disease, smoked, drank heavily, took drugs or had an accident while pregnant, or if we were born into a culture where people were subject to drought and starvation we may remain undersize, underweight or have some mental problem. What we actually become then as human beings is called a **phenotype** - the consequence of the interaction between our genetic inheritance and the environment we find ourselves in.

We *are* born with many abilities. For example, certain aspects of our visual system are available to us from birth. Much of what we become however is a result of the experiences we have and the people we mix with. Whether our parents are strict or easy going, what our friends are like, the culture we live in, how wealthy our family is all combine to make each of us what we are. As the science of genetics advances, we are becoming a bit more certain of the role genetics has, or does not have, in shaping us physically, cognitively, socially and emotionally. The degree to which genetics and environment influences us developmentally is known as the **nature-nurture debate**.

Maturation

Another biological influence on us, the developing organism, is the rate at which we mature. **Maturation is the process of physical growth**, and starts at conception. All normal human foetuses the world over develop at the same rate. We all learn to manipulate our hands and fingers; to move (or *orientate*) our heads; to crawl and to walk at approximately the same time. This progressive rate of development is the same for all children and is genetically determined. We can only learn to adapt our behaviour when we are maturationally, or biologically, ready to do so. This is evident in infants about one year old, who can crawl like champions and stand up with support, but because of their body shape cannot yet walk. Quite simply, their legs have not yet straightened enough to support upper body weight. Walking can only occur when the infant is physically - or maturationally - ready.

Human beings do not mature very quickly. For the first few years of life we are the most helpless of all species. Almost 25% of our lives is spent as an immature child. No other animal spends as long preparing for adulthood as we do.

Is development continuous or does it happen in stages?

As well as the nature-nurture debate, developmental psychology also has an interest in discovering what, and whether, physical, cognitive, social and emotional changes are related to identified age related **stages** in our life; or if these developmental changes are continuous, or **non-stage** related. The history of developmental psychology has seen some controversy as to whether language, personality, moral values, intelligence etc. are developed at, and through, fixed and identifiable stages in our life or whether they develop continuously throughout the human lifespan.

If certain skills and abilities (or behaviours) *do* develop in stages (and there is now a lot of evidence to suggest this is the case), developmental psychologists then look for certain boundaries, or parameters, to differentiate between stages of development associated with particular stage-related behaviours. Take what has been found out about the development of language for instance:

- **Each stage exhibits a particular kind of behaviour not found in a previous stage**. The first stage of language development in infants is called '**babbling**'. Babbling is where a baby meaninglessly repeats consonant sounds like *mamaa* or *dadaa*. Babbling happens around 4 months of age and ceases when the next identifiable stage of language development; the learning of first words, is mastered.

- **The kind of behaviour (and associated thinking) that goes with each stage must be different**. Extending the above example the meaningless babbling of consonant sounds sees the developing infant, because of their parents excited behaviour, begin to associate particular sounds with particular objects in their environment. They begin to develop vocabulary as a consequence e.g. *daddy, mummy, teddy* etc. They realise that particular sounds have a particular meaning. Particular sounds represent things in their environment. As this develops they acquire more words, which allows even more meaningful communication with those around them. They ask questions and can state preferences. They could not do this earlier.

- **All children must go through identified stage-related behaviours in the same order, at approximately the same age and generally at the same rate**. The development of language is again an obvious example - in that we can identify particular 'language' behaviours occurring within particular age-stages.

THE DEVELOPMENT OF LANGUAGE: AN AGE-STAGE RELATED PROCESS	
Identified behaviour	Identified common age
Babbling	4 months to one year
Using words	1 year to 18 months
Using simple sentences	18 months onwards

This **sequence of development** regards language as the same for all children in the main. It is this combination of mental activity and actual behaviour that is the subject matter of developmental psychology. From a lifespan point of view what we try to do is discover what type or kind of physical, cognitive, social and/or emotional development is occurring at a particular time for a person. What are these developments and are they age-stage related or do they develop gradually across the human lifecycle?

LIFE SPAN DEVELOPMENT (COMPULSORY)

Information: Introduction

The human lifecycle is often 'compartmentalised' in developmental psychology. An understanding of lifespan development thus sees developmental psychologists investigate, within and across identified age-stages, physical, cognitive, social and emotional change during our life-time. Important age-stages across the human lifespan are:

- **conception to birth**: often referred to as the **pre-natal stage** of development
- **infancy**: often referred to as the **neonatal stage** of development
- **childhood**
- **adolescence and adulthood**
- **old age.**

'Lifespan development', at Intermediate 1/2 identifies infancy, childhood, adolescence, adulthood and old age (ageing) as especially important age-stages in the human lifespan. Lifespan development is a relatively new approach in developmental psychology. As late as the mid 1970s those who would be termed 'developmental psychologists' today only studied physical, cognitive, social and emotional development in babies and young children from pre-birth to around age 7. They were child psychologists as such. Economic boom in Britain during the affluent 1960s; the raising of the school leaving age from 14 to 15 and then to 16 by the mid1970s and the impact on the welfare state all came together to help expand the age-ranges in which developmental psychology was interested. Adolescence, or the 'teenager' was invented in the 1960s. Previously, in our culture you were identified as either a school child or a worker. There was no 'in-between' stage. Teenagers became an identifiable group in our society, separate from children and adults. Indeed today, the European Union officially recognises a *young person* as someone between 16-25. From not existing forty years ago, they are now institutionalised! Less-well-off cultures have little need to make such a distinction.

Better health care from the cradle to the grave in the United Kingdom also gave rise to a greater proportion of the population living longer. Certain psychological processes such as memory and attention as they developed and changed over our life became of interest to developmental psychology. Alzheimer's disease and senile dementia began to become known. Greater understanding of memory in old age has benefited an understanding of memory across the whole of the human lifecycle. Lifespan development from the point of view of physical, cognitive, social and emotional development and change was born.

In a general sense, each age-stage or particular **age span** sees us investigating physical, cognitive, social and emotional development. This helps developmental psychology put forward ideas as to how we develop and change *throughout* our life. A physical, cognitive, social and emotional overview of **all** these four parts of the **holistic** jigsaw of developmental psychology is why the topic is often said to take a **whole-life approach** to lifespan development.

Particular age-stages sometimes emphasise one aspect of development and change over another. For example, investigation at the pre-natal stage is almost exclusively physical or biological in nature. Investigation of infants during the neonatal stage places more emphases on physical and cognitive development, rather than social or emotional. The period of childhood allows developmental psychologists to begin to investigate our social, moral and intellectual development. Adolescence sees us study aspects of emotion and social behaviours in relation to great physical (and cognitive) change for the developing teenager. Finally, adulthood and old age are particularly concerned with physical and cognitive development and change, personality and social development.

The pre-natal stage: physical development

The period from human conception to birth, called the **pre-natal stage**, lasts around 280 days (9 months) and is divided into three stages of foetal development

- **the germinal stage**
- **the embryonic stage**
- **the foetal stage.**

The germinal stage

Conception gives rise to the first stage of pre-natal development, the germinal stage. Conception involves successful fertilisation of the female ovum (egg) by a male sperm in the female fallopian tube. During the next 10-14 days, the zygote, the fertilised egg, repeatedly copies and divides itself (mitotic division) as it travels to the uterus. A mass of cells are formed (the human embryo) and implant on the lining of the uterus. Each of these cells is *undifferentiated* (not different) from each other, in that each is an exact copy of it's neighbour.

The embryonic stage

When the cell mass implants, the embryonic stage begins. For the next six weeks, the cells differentiate both in structure and function. What this means is that some cells develop into protective structures i.e. the placenta, the umbilical cord and the amniotic sac, while others go to form basic body parts.

The **placenta** is the protective organ that surrounds and allows nourishment to, and waste elimination from the developing embryo.

The **umbilical cord** carries blood containing essential nutrients from the mother to the embryo via the placenta. It discharges waste from the embryo to the mother by the same route.

The **amniotic sac** surrounds the developing embryo in a thick protective suspension fluid called amnion.

Other differentiating cells develop other body structures. By 8 weeks after conception it is possible to identify some basic body structures taking shape. At this stage many of these do not work or more accurately are *non-functional*.

The foetal stage

The foetal stage begins when a basic form of each structure is present. For the remaining 32 weeks of pregnancy, cells continue to divide and differentiate to build functional (*working)* body structures and to increase the size and body weight of the developing foetus. Physical development proceeds in a **cephalocaudal** fashion. This literally means 'head first' - hence the reason why a baby's head is so much larger than the rest of it's body when born. Indeed the next two years of life sees the baby's body catching up in terms of size with its head. The foetus is still entirely dependent on its mother for nutrients and waste disposal.

What do you think?

Given that a developing foetus is entirely dependent on its mother's own body environment for nutrients and waste disposal during the pre-natal stage, what implications does this have for the developing baby?

What measures can a mother take to better ensure the birth of a healthy baby?

Infancy

The neo-natal period

Infancy spans the first two years of life, beginning with what is called the **neonatal period** of the *first month* of life. The **neonate**, as the new-born is often referred to in developmental psychology, is very competent. Although their **cerebral cortex** (brain and spinal cord) is not yet mature, neonates display a variety of inborn or innate behaviours called **reflexes**. An innate '**rooting**' reflex (turning in the direction of an object when it brushes against your cheek) allows it to locate the nipple despite poor vision. The automatic **sucking** reflex of a new-born allows it to operate on its mother's nipple, or bottle, to allow for essential feeding which helps ensures its survival. They also display a well-developed sense of hearing and smell that they use to identify people. **Visual acuity**, the sensation of being able to see things clearly, is still developing.

What do you think?

Why do you think these reflex behaviours are available to the new-born infant?

Does a baby learn these behaviours? If not, how do you think they come about?

Physical development

From birth to two years of age it is very apparent that a baby physically develops at an astonishing rate. Observation of growing infants indicates that their body part proportions change as the arms and legs catch up with the head and upper body. Development of muscles and the **motor** centres of the cerebral cortex together allow the infant to progressively reach, grasp, roll, sit, crawl, walk and vocalise (talk). The order in which these **psychomotor developments** occurs is the same for infants the world over. Known as **epigenesis**, this is seen as evidence of the role of **maturation**, which is the common process of physical growth due to biological/genetic ageing rather than learning.

Cognitive development

While this is dealt with later in these support notes as an optional key concept, it is useful to note that it is in infancy the **symbolic function** emerges. This is the term developmental psychologists use to describe how we develop our ability to think to ourselves and to speak to others i.e. we think and speak using commonly agreed language symbols which represent objects, images, people, events etc. Infants gradually learn that certain combinations of the babbling sounds they make *represent*, or symbolise, people and objects. This is aided by the maturation of brain areas associated with the development of memory and language such as **Broca's area** and **Wernicke's area**. When conducting a post-mortem on a patient, who could understand, but not produce speech, Broca (1861) discovered very specific brain damage in the brain's left-frontal lobe. He deduced this area to have something to do with our ability to *produce* the *sounds of the words we make*. In 1874, Wernicke identified an area of the brain at the top of the temporal lobe that is responsible for our ability to *understand* speech following a case study and post-mortem on a man who could produce speech but could not understand what was being said to him.

Infancy also sees the **maturation of memory**. By age two, our memory structure is the same as that of an adult. This gives us the ability to remember, for example, that a specific combination of sounds represents a specific object in our complex world. We put sounds together first simply, and then in a more complex fashion to enquire about things and to put forward our own point of view. Toddlers have an amazing capacity for enquiry quickly realising that the people, objects, images and sounds that makeup their world have 'names' that represent them. Even better, everyone who *can* speak agrees on what these names for things represent! The discovery of the importance and power of language by infants at this early age is an indication of just how vital the maximisation of its development is for their future survival. By age two, most infants can communicate in two or three word sentences, can think through simple problems said to them and have a basic understanding of the power of 'language' as seen in the way they often deliberately use crying to get what they want.

All this is related to the work of the famous psycholinguist Noam Chomsky. A psycholinguist is someone who studies the origins, development and importance of language for human beings: Chomsky (1959) argues human beings the world over are born with a biological predisposition towards acquiring language. Our brains are essentially wired and programmed to allow us to acquire, understand and use language. Chomsky says we have to trigger this innate **language acquisition device** (**LAD**) by our teenage years, otherwise we can lose the ability to vocalise and suffer the effects of language **privation** as a result. The development of language is age-stage related and depends to a great extent on physical/biological developments in our brains, or **cerebral cortex**. The interaction of biological maturation, our environment and individual **cognitive development** is most important.

What do you think?

Why is it important to learn to talk in infancy?

What does language allow us to do as individuals?

What does language allow us to do with others?

Social and emotional development

During the first two years of an infant's life, increasingly more complex social and emotional behaviours begin to emerge. As early as two months, infants begin to react in a consistent way towards certain objects and events e.g. showing excitement when 'Dadda' comes into the room. These consistent patterns of behaviour are known as **infant temperaments**. They might be said to be genetic predispositions towards a particular personality type - suggesting that the beginnings of individual personality may be innate. Temperaments are the building block to personality. All infants display them but in differing degrees.

Interestingly, the first attempt to classify people into personality types using temperaments was made over 2 500 years ago by Hippocrates in Ancient Greece. He believed we each behave in a particular way because of an excess of one of four bodily fluids in our body. These fluids are blood, phlegm, black bile and yellow bile. An excess of one of these fluids or **humours** was the cause of a particular temperament or general personality. Thus, if you had excess blood you would have a sanguine personality, excess phlegm - a phlegmatic personality, excess black bile - a melancholic personality or excess yellow bile - a choleric personality or disposition. We still use some of these phrases to commonly describe people's personality today even if the cause and effect relationship is wrong!

Social behaviour also occurs during this time. By six to eight months, infants form **attachments** to important people in their world e.g. mum, dad, brothers and sisters (called **siblings**) or indeed anyone who would be thought of as the baby's caregiver. (The optional key concept of **attachment** concerns the importance of forming attachments in infancy, as failure to do so can affect current and later cognitive, social and emotional development and growth).

By age two, most infants begin to look forward to opportunities to socialise with other children. This helps them begin to realise that we are by nature gregarious creatures, in that we naturally seek company. However, living successfully with others means you have to be less selfish, more co-operative and agree to stick to certain rules. The realisation of this does not happen easily for the developing infant as he or she enters the next age-stage in developmental psychology (see **sociability**).

Childhood

Physical development

Childhood is the period from about age two to twelve. In general physical growth slows markedly in comparison to the pre-natal and neonatal age-stages. Behavioural changes on the other hand appear almost daily. Children begin to show **individual differences** in comparison to others i.e. observable differences in skills and behaviours among children of the same age, background culture etc. These individual differences arise as a consequence of genetic endowment, affecting physical and cognitive development and the child's individual experience in the world.

Individual differences are often seen in children who early show a proficiency for music, sport, art, etc. Just how far these apparent differences will develop is heavily influenced by our experiences in our environment. By age five to six, overall physical growth declines to a slow but steady rate. Permanent teeth begin to appear. It is by now we can quite accurately predict who will be short or tall in adulthood.

Individually children show improvements in gross and fine **motor** skills and hand-eye co-ordination. They don't fall over as much playing football and at least try to tie their own shoelaces! They can catch a ball thrown at them; cut with scissors and symbolise and draw ever more meaningful **representations** of things in their world.

Cognitive development

Cognitively, children develop progressively more sophisticated memory and reasoning skills during childhood. The reason for this is the continuing **biological maturation** of our cerebral cortex or brain. We usually cannot remember anything about our lives before age three. The reason for this is that the part of our brain responsible for long term memory is still developing during this time. Although children between two and five can clearly pay attention and learn, they often fail to recognise what they need to know to solve a problem and how to use this knowledge more efficiently as a result. They thus approach learning tasks in an unsystematic fashion. Biological maturation, increased experience of similar learning situations and increased exposure to new and novel ones all interact during childhood to help identify particular stages in cognitive growth, especially that of thinking.

It is interesting to note that the child's developing personality also affects their thinking. Children between two and five consistently think, understand and interpret their world entirely from their own point of view. Their thinking is said to be **egocentric.** They have difficulty in appreciating anyone else's point of view. Mum saying 'No' to a demand for sweets just does not compute! Thinking also tends to be rigid and categorical and very difficult to change once learnt.

Once a young child thinks she has grasped the rules of a game, for example, it is very difficult to get them to appreciate that the 'rule' concerning everyone else having to let her win is one their Nana made up and does not apply in the real world! From age five to twelve, children are better able to focus in on the relevant features of a learning task, and can understand the effects their, and others, behaviours may have. Thinking becomes more logical, flexible and creative. It becomes evident that the cognitive process of thinking and problem solving develops in stages.

This is in contrast to another cognitive process, language. **Language** is mastered by children between age two to five. The un-grammatical two-and-three word sentence of the two year old are rapidly replaced by longer, more grammatically correct sentences, containing nouns, pronouns, verbs adjectives etc. We have an insatiable desire for the acquisition of language in early childhood. Children of this age are constantly seeking meaning, and wanting to give meaning to, the objects, people, images and situations they experience around them. They also have an awareness of what is 'good' and 'bad' vocabulary and sentence construction. Language development can be enhanced greatly by caregivers, teachers, siblings (brothers and sisters) etc. gently correcting the language mistakes of children. They do not seem to mind and indeed seem to *want* to know what is the more correct word or phrase in the circumstance. This development of vocabulary and grammar greatly benefits thinking. By age five, young children are also aware of the rules or conventions used in spoken language, such as taking turns in conversations, sticking to the topic of conversation and adding information to conversations to increase it's content and interest for others. The development of language is age-stage related and depends to a great extent on physical/biological developments in our brains, or cerebral cortex. The interaction of biological maturation, our environment and individual cognitive development is once again emphasised.

Intelligence

It is not the purpose of Intermediate 1/2 Developmental Psychology to debate the question 'what *is* intelligence?' This is more the province of units like 'Individual Differences'. Further, the study of 'intelligence', as found within developmental psychology, is examined in greater detail in the later optional key concept *Cognitive development*. At this point however, it may be useful to try to get a general idea of what intelligence might be, and more importantly, what influences there can be on the maximisation of whatever intellectual potential we have. This is us back to the nature-nurture debate, or the influence our genetics and environment play in the unfolding of intellectual ability.

What intelligence *is* has intrigued mankind since the beginning of time. In a general sense, '*Intelligent activity consists of grasping the essentials in a situation and responding appropriately to them*' (Heim, 1970). The ability to be able to do this is as a result of our genetic inheritance from our biological parents *and* our own learning experiences in the environment we are brought up in. Debate has raged as to how much genetics, and how much environment each individually contribute to our 'intelligence'. Psychologists like Eysenck and Jensen would argue genetics contributes 75%+ to our 'intelligence'; while Kamin would argue the opposite - that environment makes a 75%+ contribution towards intellectual ability. Who is the more correct? The answer is neither.

The science of genetics nowadays allows us to say that biological/genetic inheritance does play a part in overall intellectual growth and that, as measured by intelligence tests (or **IQ** - Intelligence Quotient tests) genetics contributes towards 60/70% of our IQ. On the other hand, environment contributes between 30/40%. As most of the population share the same IQ of around 100, the genetics-environment debate is a bit pointless. Developmental psychology is much more interested in the interaction of genetics and environment and how we can maximise all people's 'intelligence' by being

aware of the importance of environment as the factor which affects the difference between one person developing their intellect to the maximum and another not being able to do so. The social setting, or environment, we find ourselves in is of immense importance to the potentialisation (maximisation) of whatever abilities we have in the first place.

Social development

From age five or six, most children get greater opportunities to interact or mix with children of their own age. Parents become less important as the influence of the **peer group** grows. A peer group consists of those you identify as being most like yourself i.e. your classmates, friends, work colleagues, etc. Its influence is great - especially in the teenage years.

This is particularly emphasised by sociologists and social psychologists when they talk about **socialisation**. They say we all go through a socialisation process where we learn the common rules, norms (standards of behaviour), beliefs and values of the society we are brought up in. Great influences on socialisation are parents, teachers and our peer groups.

Experiences gained from mixing with others will influence the child's developing personal social identity or **self**. During childhood, individual children begin to show a variety of social patterns of behaviour when they are around others. This may be because of a genetically influenced temperament, and certainly will be because of previous past experience.

We can often identify those children who are shy or insecure and those who are confident and display leadership qualities. Popular children are typically 'good-looking', self-confident, competent and find that others seek out and enjoy being in their company. Children who are perceived by other children as being behaviourally different in some way (e.g. if they are over-aggressive) often find difficulty in joining and being accepted by the peer group and ultimately can be left to themselves. Most interestingly, a child's skin colour, class, cultural background or physical difference in comparison to others does not seem to be an issue in the formation of the peer group at this age. This is sadly not the case for long.

As the child gets older the less influence a previously important peer group has. Parents have less and less influence on the child as s/he gets older. The power of whom a child perceives as their peer group is enormous. A pre-school child is heavily influenced by its parents. This begins to wear off when s/he starts school. Initially the teacher is looked upon as some kind of God, and the same child will often contradict her parents wishes with the phrase '*The teacher said so...*'

By age seven or eight the same child no longer meekly accepts her mum's idea of what is style! By the teenage years being seen to want to be like your mum, dad or teachers is definitely uncool. The socialisation process and the influence of different peer groups on each individual's social development should not be underestimated.

What do you think?

If you are, or when you were a teenager, who:
1. Influenced your style of haircut and clothes the most?
Criticised your style of haircut and clothes the most?

2. Influenced what music you like? Criticised what music you like?

3. Influenced when you thought you should be in at night?
Criticised you when you were wrong?

Do you think your parents were influenced or criticised by the same people?
Have our parents learned anything?

Who will influence and criticise your teenage child's sense of style,
music preferences and social behaviours the most?

Sociability

Buss and Plomin (1984) identify **sociability** as a particular **temperament** we all have at birth. Sociability is genetically inherited and innate. Sociability is in our nature. It is our gregarious or social side to being human - our inbuilt need to want and be with others. We need others from a biological, cognitive, social and emotional point of view.

Sociability is very evident from birth. Babies react with excitement to encourage our social behaviours with them. They appear to know that smiling and being pleasant to others is a necessary prerequisite to their survival.

Our biological genes will determine the amount and types of sociability we each show towards others as we grow and develop. *Sociability* temperaments or behaviours can be identified as:

- our individual, but common, need to look for and get pleasure from being with others
- how much or how little we each need to be on our own or with others
- how much we need to give of ourselves to shared activities
- showing emotion towards and getting emotions from other people.

These predispositions of temperaments begin to unfold in infancy. Our social experiences, and what we learn as a result are also influential in determining our sociability towards other people. If we were more shy than other babies in early infancy and this 'shyness' has been commented upon and viewed negatively by others as we grow, it is not at all surprising to find the same person showing introverted adult personality traits later on in life.

Put another way we all share a need for others but we do not all share the same *degree* of need for others. Some people will be most at home being very outgoing and constantly in other people's company. Some others will be equally happy being just part of the group, or not part of any particular group at all. Some people will be

perfectly happy being on their own, thinking or reading to themselves. Others would find this a reflection of just how popular they think they are, and would worry about it!. Some of us have an immediate need to tell a new found friend our whole life story, warts and all. Other people on meeting someone they don't know too well, would be a lot more cautious about what they reveal of themselves. This is a sign of the degree of need each of us has towards being sociable with others.

Self-image or personal identity

From as young as two, children begin to develop an idea of personal identity or **self-image**. They have a **self-concept**, in that they know who they are and who they are in relation to other people i.e. they understand their name, that they are part of a family and know who is mum, dad, aunt, uncle, brother, sister, neighbour, nursery nurse, primary 1 teacher etc. At age five most children's descriptions of who they think they are will be very categorical and rigid. This is especially true in terms of age, **gender** and associated behaviour patterns. A child of six will be very precise as to whether they are 6, 6½ or nearly 7. If a girl, for example, she will behaviourally display her gender through gender-related play, preferences and conversation. '*Star Wars Episode 1 - The Phantom Menace*' is more appealing to little boys than little girls but what about '*Snow White*' or '*Anastasia'* on the other hand?

Developing self-image and related **sex-role identification** in young children is greatly influenced by the messages they receive from their environment. Sex-role identification: comprehending that you are a little boy or a little girl and associated gender behaviour (behaving in a masculine or feminine way) is very evident from age two to five. Their sex-role behaviour is also categorical and rigid. Children have a very stereotyped idea about what is masculine and feminine behaviour. Many little girls in Scotland, around age five will not wear trousers - despite the weather. They associate trousers with little boys of the same age, and they are *definitely* not one of them! This can be much to the dismay of parents and other **primary caregivers** who try to bring up their children in a non-stereotypical way i.e. by not encouraging toy guns and weapons for little boys, or dolls, toy kitchenware etc. for little girls. In this instance caregivers face an uphill struggle. What young children see other boys and girls doing, what they see brothers and sisters doing, what they see mum and dad doing, what they see on television, etc. all contribute to the development of their self-concept, their identification with male or female sex-roles and associated gender behaviour during this time.

Between age five to twelve a child's self-concept and sex-role begins to widen out. The primary school years see children begin to describe themselves using terms like 'nice', 'smart', 'tall', 'small', 'pretty', 'handsome', etc. This is evidence that they are beginning to compare, contrast and most importantly evaluate, or *value*, themselves in comparison to other children in their peer group. This **social comparison** is very influential across the whole of childhood and the teenage years in the development of our **self-confidence** (how good we feel about ourselves) and **self-esteem** (how much we value, respect and appreciate whom we have become).

Emotional development

Attachment: Critical and sensitive periods

Attachment, in psychology, is the special term used to describe the mother-infant bond formed at birth or soon after by a wide variety of species including human beings. The special name given to the unique *human* mother-child attachment, or bond, is called **monotropy**. It is an intense emotional bond which is of immense importance in the physical, cognitive, social and emotional development of any new-born.

In humans, its absence can seriously affect the developing person's ability to form loving, sexual and non-sexual relationships with others. Its absence can also affect their moral development, essentially the ability to discriminate between right and wrong and also their ability develop intellectually. The social, emotional and cognitive affects of the absence of maternal love, or **attachment**, in early life was first brought to our attention by Dr. John Bowlby in his paper 'Maternal Care and Mental Health' in 1951. He argued that a **monotropic bond** has to be established between caregiver and child either at birth or during early infancy otherwise the child may develop cognitive, social and emotional difficulties in late life.

The background to his theory lies in the animal kingdom.

Ethology and imprinting

The observation and study of species- to-species behaviours and human-animal comparison is called **ethology**.

Ethology first gave us an insight into the impact the mother-infant bond has on the overall development of a healthy adult animal. The process of the establishment of the mother-infant bond found in the animal world is called **imprinting.** Imprinting was first studied by Konrad **Lorenz** in the 1950s. An early ethologist, Lorenz noticed that species such as ducks appeared to instinctively follow (as a consequence of genetics) the first moving object they saw (usually their mother) from birth. He deduced this as a teenager when he realised that ducklings had imprinted on him, and followed him around thereafter. He said ducklings have to develop this learnt imprinted bond within 24 hours in order to develop the necessary duck survival, social and sexual behaviours essential to adult life. If this bond is not formed within 4-24 hours - which Lorenz calls the **critical period** - ducks are socially and sexually damaged. Imprinting is crucial to individual and general species survival.

Is all lost if imprinting does not occur during the critical period?

Sluckin (1964) reran Lorenz's original experiment concerning imprinting in ducklings. He hatched ducklings in isolation from a mother-figure, *and each other* (bar one). He found that they could still imprint on a parent-figure (or any large moving object), 4-5 *days* after hatching. Lorenz's critical period to imprint of less than 24 hours was not as fixed and narrow as previously thought. Sluckin argued that the reason Lorenz's ducklings who were hatched apart from their mother, could not imprint on their mother or any large moving object after 24 hours was that they had imprinted on each other during this time. Because Sluckin's ducklings had been kept isolated from each other, their period of imprintablity had increased fivefold. Sluckin therefore renamed

the critical period, the **sensitive period**. However, it is thought the best time for imprinting to occur successfully, at least for ducklings, is the critical period of the first 24 hours.

Are the effects of imprinting permanent?

As implied above, Lorenz believed imprinting to have a permanent effect on a duck's later social and sexual success. It is only through this learnt imprinted mother-infant bond that correct social and sexual behaviours are learnt. Guiton (1966) in a most interesting experiment disputed the permanency of the imprinting bond. He reared some male chicks in isolation for 47 days. During this time an assistant who wore yellow rubber gloves tended to them. The only physical contact they had with anything/anyone else were these yellow rubber gloves coming through the aperture of their pen to feed them. On their release from isolation after 47 days, the chicks all attempted to mate with the yellow rubber gloves! After this observation, Guiton kept the experimental group of male chicks in an environment with normally-reared female hens of the same age. Although well past imprinting age the change in company had its impact. The male chicks successfully mated with the female hens and no longer yearned for the yellow rubber gloves!

Guiton argues that any subsequent social or sexual **dysfunction** (disturbed behaviour) that might have arisen as a consequence of lack of imprinting would only have come about if his male chicks had never been exposed to others of the same species. For Guiton, therefore, the affect of imprinting, or the lack of it, is neither permanent nor irreversible.

Harlow's Monkeys

Harlow (1959) took 8 new-born rhesus monkeys and reared them in isolation in their own individual cages. In each cage were two identical 'models'. One model had a large round head with eyes, ears and mouth with it's wire mesh body covered in terry-towelling; the other had a rectangular head with non-monkey like features supported on a bare wire-mesh body.

Harlow wanted to discover if the monkeys would develop a mother-infant attachment to any of the models, and whether the introduction of food had any part to play in resulting attachment. To this end he alternately had a feeding teat protruding from the body of one or other of his terry-towelling or wire-mesh models in each of his eight cages. Four were thus fed via the terry-towelling models; four were fed via the wire-mesh ones.

He found that the model that fed his monkeys had no effect on whom they attached. While the monkeys fed from the teat coming from whatever model was in their cage, all clung onto the terry-towelling one most. To test whether they had formed an attachment to one or other of his models, he first removed the wire-mesh model from the cage. This produced no reaction. When Harlow removed the terry-towelling model form the cages however, all 8 monkeys showed observable signs of distress. In a variation of this, when a wind-up teddy was put into each cage and let go, the monkeys all ran and clung to the terry-towelling model burying their heads in its chest,

in much the same way as a small child might when confronted with an unusual and strange situation. Interestingly, they all displayed similar 'peeking', or 'keeking', behaviour to that of human children when, after a while, they would 'peek' up from the terry-towelling 'mothers' chest and look in the direction of the teddy - becoming a bit more confident each time they did so.

In a field test situation (in this instance in the open air) the young monkeys explored quite happily when the terry-towelling model was present but became distressed if it were removed. Harlow's work confirms that attachment is not related to food (as was once thought) but more to do with our need for tactile, or sensual, comfort. It is the physical and related mental, experience of someone else's love for us that is important.

Of this **longitudinal study** - which used elements of laboratory, field, natural experiments and natural observation - Harlow (1962) wrote another report on his monkeys. He reported that they had grown up physically well, but that all eight had developed social and emotional difficulties no matter whether their 'mother' had been wire-mesh or terry-towel! In comparison to other normally reared rhesus monkeys, they were more timid and more frightened of new experiences, had immense difficulty in social situations and found reproduction impossible. Harlow concluded that there is a critical period of around 6 months where a rhesus monkey has to form an attachment with other monkeys otherwise social and emotional development becomes impaired or damaged.

To try to rectify the situation, and to measure the permanency of **maternal privation** (not being able to experience monotropy as no mother was around in the first place), Harlow put his monkeys into rehabilitation with a community of more naturally reared monkeys on '*Monkey Island*'. Visiting 6 months later, Harlow observed that this 'group therapy' had helped social and emotional development slightly, though sexual reproduction still eluded them. Harlow concluded that for rhesus monkeys, the outcome of maternal and social privation jeopardises social, emotional and sexual development. Also, these effects are permanent if a rhesus monkey is deprived of maternal or other rhesus monkey contact for the first six months of their lives. Making a species-species comparison Harlow went on to say that ***human babies*** had a ***critical period of 2 years*** within which *to form necessary attachments with other humans, otherwise their social and emotional development may be similarly affected.*

What do you think?

*Why do you think Harlow was able to **extrapolate** that a human infant's critical period is 2 years in comparison to that of 6 months for an infant rhesus monkey?*

If Harlow is correct, what implications does not forming attachments in early infancy have for human beings?

Attachments in humans

As stated earlier, Bowlby was interested in the psychological effect imprinting has for human beings. He accepted Harlow's idea that the first two years of an infant's life is the critical period in its ability to form and develop an attachment to its mother. This unique mother-child bond is called **monotropy.** It is unlike any other relationship the infant may have in its life and its frustration or absence can cause the infant social and emotional difficulties in later life.

He was able to argue this on the basis of a study he conducted in 1946 in his clinic in London where he worked with disturbed (or dysfunctional) teenagers. He was able to compare 44 teenagers identified as thieves, with a similar group of teenagers, who showed dysfunctional behaviour, but were not criminal. The results of the study, contained within his report '*Forty-four Juvenile Thieves: Their Characters and Home Life*', indicates that among the 44 thieves, 17 had been separated from their mothers in early infancy. The control group by comparison only contained two teenagers who had been separated from their mothers in early infancy. He further found that among the 17 maternally deprived thieves, there were 14 who were even more socially and emotionally dysfunctional than their colleagues in that they:

- were unable to form close relationships with anyone
- had little or no moral values
- has a very casual approach to crime and its effects on their victims.

He concluded that maternal deprivation was the cause of the social and emotional problems of his 44 thieves and that ....*mother love in infancy and childhood is as important for mental health as are vitamins and proteins for physical health*' (Bowlby 1951). So much so, that in a worst case scenario, lack of maternal love, or monotropy, can result in:

- **juvenile delinquency**
- **low IQ**
- **affectionless psychopath** (a *sociopath*).

Situations where these extreme effects of maternal deprivation can occur include for Bowlby; war, famine, mother in prison, full-time working mother, etc. This was explored further by Bowlby in 1949 when he was commissioned by the World Health Organisation (WHO), a part of the United Nations (UN) to investigate the psychological effects of the Second World War (1939-45) on the thousands of displaced children who were wandering Europe at the time. He confirmed much of his earlier findings, that lack of mother-love in infancy can jeopardise intelligence and create social and emotional difficulties, in his paper to the UN '*Maternal Care and Mental Health*' published in 1951.

Is Bowlby correct?

When a theory is proposed in psychology, it is normal for it to be scrutinised at two levels. We ask:

1. How valid is the theory in the light of the research which backs it up? Has the research been conducted in a scientific manner? Are any contributory theories used in the research which are inappropriate? This is called looking at a theories **internal validity**.
2. How valid is the theory when compared and contrasted with alternative theories concerning the same topic, in this case the consequences of mother-love in infancy. This is called a proposed theory's **external validity**.

Internal validity

In putting his theory together, Bowlby used two sources to give it some impetus. First, Bowlby cites Goldfarb (1943) who himself looked at one group of children who were in care until the age of three (his experimental group) and another group who were in care very briefly after birth and were than adopted (control group). This **independent group design** allowed Spitz to conclude that the experimental group, in comparison to the control group:

1. scored lower on IQ tests
2. had problems with moral rule keeping, and,
3. lacked social skills in their dealings with others.

Secondly, Bowlby used research generated by Spitz (1945). Spitz proposed that children who had lost a parent in their early childhood often suffered deep depression well into their teenage years, and this slowed down cognitive, social and emotional development in comparison to children who had two parents during their upbringing.

Using Goldfarb and Spitz as the backdrop to his research, Bowlby then put forward evidence coming from his own clinic for disturbed (dysfunctional) teenagers in London. His research seemed to indicate that there was indeed some connection between absence of mother-love in infancy and a dysfunctional personality in later adolescence and adult life.

However, critics argue:

- Goldfarb in 1943 did not discover why it was that some children in his study were deemed suitable for adoption, and others, who remained in care, were not. **Individual differences** could have played a part in deciding who was to be adopted and who was to stay in care. Individual differences might therefore have been the reason behind lower IQ scores and problems with moral rule keeping and social relationships.

- Children in institutions, it is argued, are not just deprived maternally. They do not experience the diversity of family life. The learning experiences which shape social and emotional behaviours in their childrens home would have been different in comparison to those children who found themselves adopted. Maybe this was an alternative reason for these childrens shortcomings in comparison to the adopted group.

- Spitz was not talking about maternal deprivation, but paternal deprivation - the loss, after experience of having, a father or father-figure in the family home.

- Bowlby's research methodology (how he went about his investigation) was flawed. He used a retrospective case study approach with his 44 thieves. Retrospective case studies see participants reflecting back on their lives. As a result, they are prone to problems concerning a participant's selective memory, shadow memory or incomplete records. As these 44 teenagers were themselves convicted of criminal activities, a retrospective case study approach in this instance is even more prone to these accusations.

- Retrospective case studies find the sample able to pre-select itself. This is not a good research technique. It would have been better if Bowlby had been able to conduct a longitudinal case study - taking a whole group of children born on the same day and researching them over at least the next year. A good example of a televised longitudinal case study is the BBC's *7-Up* series which has followed the development of a group of UK children all born in the same week in 1955 every seven years.

- Of Bowlby's 44 thieves, details in individual case studies suggest that 27 were not separated from their mother at birth or in infancy. Questions must arise therefore as to *why* they became criminal.

- Bowlby was a psychoanalyst (someone who follows in the traditions of Sigmund Freud). As a result he concentrated heavily on what happens to us in the first five years of our life and generally ignored the later years. Developmental psychology would recommend we find out about a person's whole life before trying to conclude what and where in their lifetime things happened which made them what they are.

- Finally, with relevance to the internal validity of Bowlby's theory on mother-love in infancy, he ignores the reality of life in Britain. He advocated a 'constant care' mother-child relationship as the *only* way to avoid social and emotional difficulties in later life. However, he did not take account of the millions of children who are brought up in a situation where mum is absent for one reason or another and who do not suffer low IQ, juvenile delinquency or affectionless psychopathy. He also ignored the different child-rearing arrangements we have in Britain like the use of relatives in helping to look after children if mum/dad are absent, the employment of nannies and nursery nurses, situations where both parents work, single-parent families, cultural child rearing differences and practices and alternative child rearing strategies.

Bowlby's Theory of Maternal Deprivation: Its External Validity

What other alternatives are there to explain why some of us may turn out '*Bad*'?

Juvenile delinquency

Examining the causes of juvenile delinquency in 1972 and 1979, Michael Rutter concluded that in his opinion the main factor leading to delinquent behaviour such as stealing was whether or not a teenager's home-life was stressful and unhappy. Powers, Ash, Schoenberg and Sorey (1974) lend some support to his view. They looked at why there are both one-off juvenile offenders and recidivists (continual or *habitual* offenders). They believe that the factor here is stress in the home. An unstable family environment seems to be important in the development of juvenile delinquent behaviours.

Affectionless psychopathy

This is not, Rutter (1972, 1979) argues, the result of maternal deprivation, but of **maternal privation**. Privation is never having had something in the first place. In looking at Bowlby's research Rutter suggests that those who had been institutionalised and had developed dysfunctional behaviours had *never* had the experience of maternal love in the first place.

Pringle and Bossio (1960) examined the effects of maternal privation. They looked at a sample of children who were institutionalised. The sample broke down into two groups. One group, whom they labelled as 'maladjusted' had come into care soon after birth while the other, more developmentally normal group of children had, spent at least one year in their family home. The maladjusted group showed traits similar to those associated with affectionless psychopathy. They showed complete indifference towards others. Privation - not having the opportunity to form close relationships with others in early infancy seems to have an effect and gives some clues as to the formation of a personality which exhibits 'affectionless psychopathy' or 'sociopathy' in particular and non-biological 'severe personality disorders' in general.

Freud and Dan (1951) looked at children who had survived Nazi concentration camps. They found six children who had lived in a camp from an early age and had miraculously survived the Holocaust. They had not formed any close relationships with adults, were maternally deprived, and if Bowlby was correct, should therefore have shown symptoms of affectionless psychopathy. Freud and Dan discovered that they were, very understandably, suspicious of others but were not affectionless or maladjusted. This was probably due to the fact, that while in the camps the children had stuck together and had formed close attachments with each other.
N.B. the work of ethologists such as Lorenz and Harlow.

Hodges and Tizard (1978) looked at the permanency of any effect maternal deprivation had. They investigated children who had spent most of their lives in care and had not been adopted until late in childhood. Tizard and Hodges found that over time their participants could develop deep and loving relationships with the right adoptive parents. The early days were difficult for children and parents alike. Patience and support in a stable family environment was crucial in helping the children overcome the effects of maternal deprivation/privation.

Low intelligence

We now know that Bowlby relied on a number of other people's research to frame his own theory on maternal deprivation. One of these was Goldfarb. Goldfarb argued that children who suffered from maternal deprivation could end up less intelligent than **peers** who had a more normal family life. The development and maximisation of any skills, abilities etc. we may have are now known to be a lot more complex than the presence or absence of mother-love in infancy alone. For example:

Dennis (1969) investigated children in an Iranian orphanage that seemed to produce children who were less intelligent than others. He found, that although well cared for physically, they lacked much in the way of **intellectual stimulation**. This he felt to be more important in the overall development of intelligence than maternal love or privation. He also believes that there is a **critical period** up to *age two* where intellectual stimulation (as found in the 'normal' family home) has to occur. If not, children suffer, in comparison to others, an intellectual deficit that they are never able to close. While there is some merit to what Dennis says, there is debate over his idea of a critical period of intellectual development.

Skeels (1939) for example, thinks you can reverse the effects of privation. In the course of his work he came across two children in an orphanage who were both very intellectually challenged. They were subsequently transferred to a home for the mentally subnormal (as they were referred to in the 1960s). Within three months, the change in the two children was dramatic. They were more alert, intelligent and sociable. Skeels discovered that because the children were so young they had been 'adopted' by the others in the home. They had been cuddled, talked to and encouraged to play much more than before. Skeels concluded that this was the reason for their overall improvement in intellectual, social and emotional abilities.

Linking his 1939 study to his later study in 1966 is worth considering. The original study had 25 participants all of whom were brought up in an American children's home until age two. The home offered little in the way of intellectual, social or emotional development. When they were two, 13 of the children were put into a home for the mentally retarded. Their average IQ was 64.3. The average normal child of the same age would have an IQ of 100). Care was given by older, subnormal girls. The children got structured and supervised play opportunities. There was a high staff-child ratio etc. By age three and a half, the 13 children in the **experimental group** had either been adopted or transferred back to their original orphanage. The IQ of the experimental group had risen to 92.8, in comparison to their twelve peers in the **control group** who had remained in the original orphanage throughout this time.

Their IQ was found indeed to have fallen from 86.7 to 60.5. By age 7, the average improvement for members of the experimental group was 36 points, while the average loss for the control group was 21 points. In a **longitudinal study**, Skeels followed the participants into adulthood.

He found that of the experimental group:

- all had had more education than the control group participants
- one third of them had gone onto college
- one third had got married
- one third had given birth to 'normal intelligence' children
- all were, in the main, self-supporting.

The control group, who had been brought up in institutions all their childhood and teenage years were unable to earn enough to be self-supporting and were still regarded as mentally retarded.

Skeels work suggests that it is the content and amount of intellectual stimulation we receive in early childhood, which is important to eventual social and emotional development, and not as Bowlby thought, the amount of maternal love we receive. An intellectually poor environment will ultimately stifle intellectual development which will effect our developing personality, socially and emotionally.

Michael Rutter (1981,1989), attempted to pull together the arguments concerning Bowlby's theory of maternal deprivation and the intellectual, social and emotional difficulties which might emerge as a result, believes that maternal privation (but not deprivation as Bowlby thought) does have consequences. These consequences can result in intellectual, social and emotional difficulties. As a result of the early experience of having, or not having, been brought up in a stable, caring, loving and stimulating environment, children's **developmental pathways** into adulthood are affected. The amount of sensitivity, support and warmth *from* others in our early years is vital in nourishing our ability to develop genuine sensitivity, support and warmth *to* others in our later adult years. For later social and emotional stability for us as individuals, early attachments are crucial and should be encouraged and developed. Our home-life should be relatively stress-free. The effects of an inability to form attachments with caregivers in our early years are neither permanent nor irreversible. Low IQ is not as a result of maternal deprivation, or privation, but because we have grown up in an intellectually unstimulating environment. This can be enhanced by putting someone into a more stimulating environment which is itself loving, caring, supportive and encouraging for that person.

Social and emotional development

Personality

The social experiences we go through goes some way to influence the development of our **personality**. What is clear is that the emerging personality is shaped from very early on in childhood[1], and appears to progress through a series of **stages**. The idea that personality development occurs in stages throughout early childhood was, as indicated in the first unit: Introduction to Psychology, first studied by **Sigmund Freud**, in the early 1900s. He put forward his **psychosexual theory of personality development**. It suggests that children go through a series of psychosexual stages in childhood where they obtain pleasure from particular parts of their body known as **erogenous zones**. It further says that we are biologically and instinctually driven to

[1] See Temperaments and Socialibilty

maximise the pleasure got from stimulation of these zones. In doing so, our associated behaviour is often viewed as taboo. How our parents deal with this, and our experience as a result, Freud believed, could damage the emerging personality. This 'damage' he identified as particular, and sometimes, peculiar behaviours, or **fixations** in adulthood.

Freud's psychosexual stages of personality development

STAGE	AGE	CHARACTERISTICS
Oral	0-1	During infancy the focus of pleasurable stimulation comes via the baby's mouth. It is via its mouth the baby gets nourishment and nipple contact with mother. Over or under stimulation can affect the adult personality leading to an oral fixation in later life which might be evident in behaviours such as nail biting; smoking; excessive eating; drinking, etc. How many teenagers bite their nails when stressed or worried about something? How many older people reach for a cigarette?
Anal	2-3	Toddlerhood and early childhood sees the focus of pleasurable activity switch from the mouth to the anus. We get pleasure excreting and being in control of when we do so. Toilet training comes along however, and according to Freud, how strict or liberal our primary caregiver is when toilet training us can affect aspects of our personality and associated behaviour in adult life. How children between 2-3 resolve the conflict felt between previous excretion at will and society's rules concerning when, how and in what circumstance we go to the toilet can result in an anal fixation. Examples of anal fixations in later life might be those of us who are excessively neat and tidy; or indeed excessively disorganised and untidy; it might also be apparent in people who are excessively generous or man.
Phallic	3-6	Associated with the dawning realisation that they are a boy or girl, focus of pleasurable activity during the phallic stage is the genitals. Self-stimulation is found very satisfying by the young child. This gives rise to sexual curiosity about other children of the opposite sex. To confirm our sexual identity we go through a process of rejection of our same-sex parent and attachment to our opposite-sex parent or caregiver. Loving one and not the other is uncomfortable for us. We resolve this by showing our love for the same-sex parent by adopting their gender roles and behaviours. Problems encountered during the phallic stage can lead to confusion of sexual identity and sexual difficulties in later life. Constant selfish behaviour, especially in relationships may be an outward sign of psychosexual problems encountered at the phallic stage from 3-6.
Latent	6-12	The primary school years sees a fall in interest in psychosexual associations with any erogenous zone. Children during this time appear to be a lot more concerned with social matters such as school, friendships, peer group play, relationships and activities such as Cubs, Brownies, Guides, dancing, etc.
Genital	11/12+	The onset of puberty in both sexes sees a renewed interest in the genitals of themselves and others. Experimentation is a feature of these years. We feel a need to seek and experience a loving, increasingly sexual relationship with someone else. We are maturing towards establishing a long-lasting loving relationship with a partner in adulthood. There is no associated fixation with this last stage of psychosexual development.

Historical and scientific developments in psychology has seen much criticism of Freud's over-emphases on matters sexual. He did in the instance of personality however give some insight into the inter-relationship between personal experiences during our life and the development of personality. This was extended by the late **Erik Erikson** (1902-1994), a **neo-Freudian**, who proposed that it is our **social world** at particular age-stages of our life, and not our instinctual sexual urges, which affects personality development. Personality does not just depend on childhood alone but is shaped, changed and developed throughout the whole of our lives. He put forward a **psychosocial theory of personality development** which stresses the importance of our individual need for social approval and belonging, and that if this is frustrated, hindered or impeded we can end up with a jaundiced personality as a consequence of our negative experiences.

He divides the human lifecycle into 8 stages. At each stage we decide and make choices about our life based on what we experience in and from our environment. We make positive or negative psychosocial decisions which affect our personality. Erikson terms these 8 stages **psychosocial crises**. How we deal with each psychosocial stage, or crisis, in life shapes our personality. It should be noted that Erikson did not see these outcomes in an 'either-or' fashion. Most personalities exhibit aspects of positive and negative outcomes connected with a particular stage or stages. The healthy personality would see more positive rather than negative outcomes (adaptive rather than maladaptive psychosocial outcomes) being apparent.

Erik Erikson's Theory of Psychosocial Crisis: An age- stage approach to personality development

1-8 Psychosocial Crises

- *Trust v mistrust age 0-1*

On the basis of a baby's experiences in early life, an infant will begin to form an impression of its world. If it has enjoyed a stable, nourishing, loving and caring early life, it should come to view the world in a secure and trusting way. If, on the other hand, its early life has not been so stable, nourishing loving etc. it will see itself as insecure in an uncaring, untrusting and harsh world.

- *Autonomy v shame or doubt age 2-3*

Showing a Freudian influence, Erikson says our 'toilet training' years lead us to begin to believe ourselves either to be in control and physically competent or doubtful about our developing independence, abilities and skills. How others react to our efforts to become more autonomous, affects how we view ourselves. Doubting your ability, especially on the basis of what those we love tell us, gives rise to a lack of confidence in what you do and in your dealings with others.

- *Initiative v guilt age 3-5*

A time of increasing motor dependence, age three to five is also a period of intense curiosity, questioning and enquiry for the young child. How caregivers develop or discourage this, Erikson believes can affect the developing personality and related social skills. Having our curiosity encouraged, satisfied and extended develops

initiative. Being made to feel a burden or a nuisance leads alternatively to feelings of insecurity and guilt about how to deal with, and solve, all the challenges life throws at us.

- *Industry v inferiority age 6-12*

The primary school years see children exposed to an environment where cognitive, social and emotional growth is demanded and encouraged. Their experiences here from teachers, parents, **siblings** (brothers and sisters) and increasingly, their peer group will result in individuals sensing that they are competent, productive and valued or incompetent, under-productive and undervalued. Where we get our feelings of inferiority is most interesting here.

- *Identity v role confusion/diffusion age 12-19*

Puberty triggers our psychological journey for identity. We are pulled between beginning to value and recognise our own unique identity, and previous experience of knowing that to be seen as different from everyone else *can* pose problems. These years see teenagers begin to deliberately associate with others they see as similar to themselves.

As if having to confirm who they think they individually are, a group of teenagers will very often dress the same way, like the same type of music and enjoy the same activities and social scene. Movement between different groups is normal as we try and find friendship with those who better share our own individual opinions; preferences; outlook on life etc.

Successful resolution of Identity v Role Confusion/Diffusion would see someone in their early 20's who is happy with their own unique self and their role in life. If they thought about it long enough, they would also realise that their unique personality and life also means something to others. They are valued as such. If you have been unable to discover your true identity during the teenage years, on the other hand, you can come through this crisis with a confused or diffused (all over the place) identity. You would undervalue your own unique personality and probably have difficulty sustaining long-lasting friendships with others.

- *Intimacy v isolation 20s-30s*

This is the age-stage where we search for a partner with whom we think we want to spend the rest of our life. Biologically, socially and emotionally there is a great drive for intimacy with another during this time. Everyone else around us, it seems is doing the same thing. Everyone else seems to have found love. How successful, or otherwise, we are during this psychosocial stage sees us either form an intimate, loving relationship with another or doubt our ability to do so and facing a lifetime of isolation and loneliness. The downside of this stage can be extremely destructive for individuals.

- *Generativity v stagnation 30s-50s*

Between these years childcare responsibilities for adults diminish. We begin to examine how productive and creative our work and relationships are. Very often we use this time to widen our education and also give something of ourselves back to the

work place; trade union; club; community group; religious organisation etc. to which we belong. We benefit others and simultaneously feel we have 'made a contribution' in our own unique way. If, however you find that your life has become unproductive, routine and stagnant, we feel psychosocially and psychologically unfulfilled. There is something missing from our lifelong quest to discover what it means to be human. We lose direction and purpose in life.

- *Integrity v despair 60s+*

This sees us approach the inevitable end of our life. During this stage we reflect on what our past life has been like and what sort of difference we have made as individuals. We each weigh up our life 'balance-sheet'. Was it good, bad or indifferent? If, on balance, we feel we have had a good and worthwhile life we go to our deaths feeling good and at peace; if it has been not so good we may feel despair and a sense of never having been on earth in the first place.

Points to note:

Erikson, on the basis of cross-cultural comparison and working as a practitioner in the USA, *believes that we develop our personalities as a result of particular social experiences at 8 stages in our lives*. His theory is said to be ***universal*** in that it can be applied to all cultures. If we had a negative experience during a particular psychosocial stage, this can affect the adult personality. For example, if we conclude at the *trust v mistrust* stage that our world and the people in it should not be trusted, this can affect the establishment of relationships with others then and in the future. He also says that we can 'revisit' past stages in our life, and if we think we have made a negative decision which has affected our personality and gives us discomfort we can realise and rectify this.

This is one reason why older people often try to mend bridges and make amends with others they have had a serious fall out with at some earlier point in their life. Faced with *integrity v despair* they have a desire to die more at peace and less in despair with themselves. His psychosocial theory of personality has great worth at all points in the human lifecycle to try and understand why we are as we are and what we might become. *It is an **age-stage** related **theory of personality** which allows us an insight into the outcome of our physical, cognitive and social experiences coming together to affect an important aspect of human emotion - personality.*

SUMMARY: COMPULSORY KEY CONCEPT: LIFESPAN DEVELOPMENT

Lifespan development involves taking a whole-life approach to the study of physical, cognitive, social and emotional growth and change from birth to death. Our lifespan is divided up into the pre-birth or pre-natal stage, infancy or neo-natal stage, childhood, adolescence, adulthood and old age. Each sees developmental psychologists investigating particular aspects of physical or cognitive or social or emotional change.

Very often a change in one area of human development will have an impact on others. Physical, cognitive, social and emotional developments and change at particular points in our life are all inter-related to each other. Developmental psychology is interested in whether certain physical, cognitive, social and emotional events and changes happen to us all at roughly the same time and whether we develop physically, cognitively, socially and emotionally progressively in stages or in a continuous way.

Physically we all develop at approximately the same rate and in the same fashion the world over. Physical development and change is thus linked to our biological maturation. Physical change is genetically determined and age-stage related. In order to develop cognitively, we have to be biologically ready to do so. Some cognitive developments, identified as having a critical or sensitive period, happen within a particular age-stage e.g. the acquisition of language in infancy/early childhood, while others e.g. the ability to do mathematics must wait until we cognitively develop and grow from birth until adolescence.

Biologically influenced physical change allows us to socially and emotionally develop and (hopefully) grow across all age-stages in life. We cannot walk until we are biologically ready to do so but when we are, this allows for greater, more independent experiences in our world. Puberty allows for the development of an important side of what it means to be human - the long-term establishment of a close, loving and stable relationship with another.

How we handle developing social relationships with others is very much influenced by our personalities as shaped by previous past experience. How we change and develop as thinking, social and emotional individuals very much depends upon the environment we are brought up in and the experiences we have within it at certain ages and stages in our lives.

Cognitive development and physical, cognitive, social and emotional development and change in adolescence and adulthood are considered as the two accompanying *optional* key concepts.

GLOSSARY: LIFESPAN DEVELOPMENT

affectionless psychopath: identified by Bowlby. It is an extreme personality due, he thinks, to maternal deprivation (absence of mother-love in infancy) gravely affecting our social and emotional development. Related to imprinting in animals, it reveals itself in humans in people who are unable to form close loving, sexual and non-sexual, relationships with others; who have little or no moral values and have a very casual approach to crime. Affectionless psychopaths lack conscience for their actions.

attachment: the close emotional bond best formed in very early infancy between human babies and their primary caregivers - usually their mothers. It is driven by our need for physical comfort and the amount and quality we receive is thought to help shape the developing adult personality and drives how we deal socially and emotionally with others and ourselves.

biology: the scientific study of living organisms; human, animal and plant.

cerebral cortex: our brain and spinal cord.

chromosomes: rod-shaped structures which appear in the nucleus of a cell during cell division. A chromosome consists of nucleoproteins arranged into genes which are responsible for the transmission of physical, cognitive and possibly social and emotional characteristics from biological parents to child.

cognitive development: concerns perception, attention, memory, language and thinking. Developmental psychology is very interested in the development of thinking in particular.

critical period: a set period during our development where it is thought certain things must happen in order that the organism learns essential skills for its future survival. First identified by the ethologist Konrad Lorenz, he suggested a duckling has a critical period of 24 hours within which it must trigger its innate following behaviour by imprinting on the first large moving object it sees - usually it's maternal parent. If imprinting does not happen during this critical period later, development is effected.

deoxyribonucleic acid: DNA: our genetic inheritance passed onto us by our biological parents which influences physical, cognitive, social and emotional development - though not all in equal measure. DNA, or deoxyribonucleic acid, is what the 'nature' side of the nature-nurture debate is all about. What influences us more, our genetic inheritance in the form of DNA or our environment?

developmental pathways: Michael Rutter believes that the experiences we get during infancy and childhood, especially in the form of a stable, loving family environment, determines in many respects the relationships we form with others as we get older. If our parent(s) or primary caregivers were caring, loving, nourishing, supportive, etc, to us during our childhood, *we* are more likely to show the same behaviour in our own relationships with others.

developmental psychology: the study of physical, cognitive, social and emotional changes and developments, including their causes, effects and inter-relationships over the course of the human lifespan.

dysfunction: abnormal or disturbed behaviour as a consequence of physical, cognitive, social or emotional difficulties.

egocentric: seeing and interpreting the world solely from your own point of view. Egocentricity is very evident in children from about age 2 onwards. It should disappear as the child gains more experience of their worlds especially in social and emotional relationships. In adults, egocentrism would be recognised as continual and consistent selfishness.

emotional development: an aspect of developmental psychology which involves personality, aggression, motivation, the development of a self-concept etc. Emotional development is closely related to social experience, cognition and biologically determined physical changes during our lifetime.

environment: the world we live in and the experiences we have in it.

experimental group: a term used in scientific research which indicates that a selected group of people are receiving a 'treatment' of some kind or another, which another selected group, (the **control group)** are not. This is to allow for comparison between the two groups to see if the treatment has caused any effect.

epigenesis: or epigenic principles. The idea that we cannot do something until we are biologically mature enough to do so i.e. walk, talk, remember complex events, think in an adult fashion, etc.

external validity: how a theory holds up in relation to alternative theories on the same issue. For example Jean Piaget has a most useful theory concerning the way children learn. However, learning can also be explained in psychology from the point of view of behaviourism, social learning theory and cognitive social learning theory.

extrapolate: to generalise out your findings to a larger, and perhaps different, population.

erogenous zones: areas of the body associated with pleasurable sensation and activity. Identified by Sigmund Freud, erogenous zones include the mouth, anus and genitals.

ethology: the biological study of animal behaviour.

fixation(s): an aspect of an adult's personality usually identified as a peculiar behaviour which has been caused by under- or over- stimulation of an erogenous zone in childhood, or as a consequence of a parent's attitude to a child getting pleasure from an erogenous zone.

foetus: the developing embryo.

gender: masculine or feminine specific behaviours. Our sex, male or female, is genetically determined. Gender on the other hand is learnt.

genetics: the study of inherited characteristics.

genotype: an individual's collection of genetically inherited characteristics from their biological parents which may influence their physical; cognitive; social and emotional development.

holistic: a whole person approach in psychology. Understanding a person from all relevant points of view. For example, understanding a person's development taking into account the causes, effects and relationships between physical, cognitive, social and emotional changes and developments across the human lifespan.

imprinting: an innate ability in many animal species which sees new-born attaching to the first large moving object it sees, by following it. Imprinting is crucial to survival.

independent group design: a research strategy used in psychology which sees two dissimilar groups of people being compared to each other in an experiment.

individual differences: physical, cognitive, social and emotional differences between individuals. The study of individual differences in psychology looks at, for example, personality and intelligence. These are aspects of being human which we all share and recognise in each other, but in which we notice differences between us.

infant temperament: a personality disposition displayed in infancy e.g. a quiet baby, a demanding baby etc. Temperaments are thought to be influenced by our genetic inheritance and are the basis to the eventual adult personality.

internal validity: how scientifically correct is the method used to collect and collate appropriate data which contributes towards a theory.

IQ: Intelligence Quotient. An IQ test score for a 'normal' person will be 100.

LAD: Language acquisition device. The biological 'hardware' in the brain that sees us innately want to acquire and develop language.

longitudinal study: a psychological study into an individual or group of individuals over a least one year following physical, cognitive, social or emotional changes and developments.

maternal privation: the complete absence of mother-love in infancy which is felt can contribute towards social and emotional difficulties in later life.

maturation: associated with our genetics, maturation is the biological ageing of our bodily processes and structures. This is often necessary before physical, cognitive, social and emotional developments can occur.

monotropy: the unique mother-infant bond formed at birth.

motor skills: a particular physical dexterity or ability related to biological maturation e.g. body manipulation, crawling, walking, etc.

nature perspective: those who believe that what we are, and what we can become is determined largely by our genetic inheritance. Our genetics, according to this position, will determine our physical make-up, cognitive abilities, social relationships and emotional behaviours.

neo-Freudian: someone who follows in the psychoanalytic tradition established by Sigmund Freud in the early 1900s.

neonatal stage: the first month of human life.

nurture perspective: those who believe that what we are and what we can become is determined largely by our environment. Our environment can effect physical make-up, cognitive abilities social relationships, and emotional behaviours.

peer group: groups of people we most closely associate with. Peer groups include friends, workmates, your community etc. The influence of the peer group in the formation of social behaviours, our identity and our emotional responses to life is most apparent in adolescence.

phenotype: what our genetic inheritance *actually* becomes, physically, cognitively, socially and emotionally. Our phenotype is strongly influenced by the environment we are brought up in.

pre-natal stage: pre-birth. The nine months of human foetal development.

primary caregivers: includes those who look after, love and nurture us in infancy, childhood and adolescence. Primary caregivers are mothers, fathers, stepmothers, stepfathers, aunts, uncles, older brothers or sisters, etc.

privation: never having something in the first place. This is opposed to *deprivation* which means having something and then having it taken away from you.

psychomotor development: the development of centres of the brain which allow for physical motor skills to develop.

psychosexual theory of personality development: A theory on personality development as determined by psychosexual experiences in infancy and childhood put forward by Sigmund FreudHe says this experience will form aspects of the adult personality. He divides childhood into five psychosexual stages – oral, anal, phallic, latent and genital. He says frustration of pleasurable activities associated with related erogenous zones of the body can lead to peculiarities of personality and behaviour in later adult life. These are called fixations.

psychosocial theory of personality development: an alternative theory on the development of personality put forward by Erik Erikson. He says personality is not just shaped by childhood experience but throughout our whole life. Unlike Freud he says that personality is not a result of erogenous pleasure but as a consequence of having to make decisions based upon past experiences at certain points of our life. He calls these decision points 'psychosocial crises' and that we confront them at eight stages throughout our life. The influence of our social world in the ongoing development of our personality is all-important.

physical development: genetically determined biological body changes and developments over the course of the human lifespan. These will have a knock-on effect on cognitive, social and emotional aspects of the ageing individual.

rooting: a new-born's innate (inherited) reflex action to turn towards objects brushing against its cheek.

self-concept/self-image: an idea of who you are as an individual. The self-concept begins to be formed in infancy with the gradual realisation of your sex. You begin to form your identity by behaving in a masculine or feminine way. This is helped along by observation and imitation of what other 'boys' and 'girls' are seen doing in your environment.

self-esteem: how much you respect and value yourself. Our self-esteem comes from how others react to us. We think and behave accordingly.

sensitive period: a period in our life where we are most susceptible, and better able, to learn how to do something. Language has a sensitive period from about two to fourteen years of age.

sequence of development: physical, cognitive, social and emotional changes across the human lifecycle. Some of these happen in identifiable and progressive stages (age-stage cognitive problem-solving and language abilities, etc.) while others happen in a similarly identifiable but continuous manner (the ageing process, non-age stage development of personality etc.)

sibling(s): brother(s) and sister(s).

sociability: our ability to interact, or mix, with others. Sociability is related to our developing realisation that life so much more enriched when we are with others in a family, class, work or community situation. However, being with others has a personal cost for individual freedom. We have to give up a part of our individuality to successfully work together as a group. Sociability involves balancing the rules of social interaction against our individual personality.

social development: the causes and effects of an individual's social behaviours across the human lifespan. A study of social development sees developmental psychologists looking at how we develop and change as a consequence of learning experiences in our environment. Issues of social interest include the development of play, moral development, the influence of the peer group in adolescence, the reasons why you view your self as you do etc.

socialisation: the process we go through as individuals in learning our culture's rules, norms (acceptable behaviours) and values (beliefs). Important to the process of socialisation are parents (especially our mothers), teachers, the adolescent peer group and society's structures and institutions like work, the judicial system, press etc.

symbolic function: being able to think using commonly agreed symbols e.g. *words* for things found around us. An infant begins to show it can think using symbolic representations when it shows continuous excited behaviour when 'Dada' comes into the room.

whole-life approach: are at the causes, effects and inter-relationships between physical, cognitive and social development across our whole lifetime. An understanding of memory problems in old age gives greater understanding to the development of memory across the whole of the human lifecycle. The centres of our brains associated with memory have to be biologically ready (by about age two) before we can begin to develop language and simple problem-solving strategies. Our memory will effect our cognitive, social and emotional behaviours thereafter. It makes sense in this, and other areas in developmental psychology, to take a whole-life approach to lifespan development.

STUDENT ACTIVITIES FOR LIFESPAN DEVELOPMENT

Individually or in groups, answer the following questions.

1. What do you think developmental psychology is all about?

2. Identify and tick in correct column which is a physical; cognitive; social or emotional development or change for human beings:

	PHYSICAL	**COGNITIVE**	**SOCIAL**	**EMOTIONAL**
Being part of a peer group				
Thinking				
Affectionless psychopathy				
Personality				
Vision				
Being a quiet baby				
Perception				
Going to a nursery				
Puberty				
Juvenile delinquency				
Talking				
Memory				
Falling in love				
Attention				
Shaving				
Leaving school				
Being extravert and outgoing				
Behaving confidently				
Believing in your self				
Leadership				

3. Fill in the blank spaces from the word list below.

   physical; environment: cognitive; sequence of development; social; emotional; maturation; continuous and progressive; genetics;

   Developmental psychology is interested in _____developments and changes as they occur to us across the human lifespan. These fall into four categories: _____, _____, _____ and _____. Physical change related to age is caused by biological _____ and is determined by our _____. Physical change has to happen before we can experience change in other cognitive, social and emotional aspects of our life. It has been found that human beings the world over share the same _____as regards physical, cognitive, social and emotional change. Change in one area very often leads to change in other developmental areas. Of overriding importance in developmental psychology is the impact our _____ has on us regards cognitive, social and emotional development.

4. *Wordsearch: Lifespan Development Gigantic Wordsearch*

   Identify and put a line through the corresponding word in the Wordsearch overleaf which best fits each description below:

   Identified by Bowlby, it is an extreme personality due to maternal deprivation (absence of mother-love in infancy) gravely affecting our social and emotional development.

   The close emotional bond best formed in very early infancy between human babies and their primary caregivers - usually their mothers.

   The scientific study of living organisms; human, animal and plant.

   Our brain and spinal cord**.**

   Rod-shaped structures which appear in the nucleus of a cell during cell division.

   Perception, attention, memory, language and thinking.

   A set period during our development where it is thought certain things must happen in order that the organism learns essential skills for it's future survival.

   Our genetic inheritance passed onto us by our biological parents which influences physical, cognitive, social and emotional development.

   The study of physical, cognitive, social and emotional changes and developments, including their causes, effects and inter-relationships over the course of the human lifespan.

   Abnormal or disturbed behaviour as a consequence of physical, cognitive, social or emotional difficulties.

Seeing and interpreting the world solely from your own point of view.

An aspect of developmental psychology which involves personality, aggression, motivation, the development of a self-concept etc**.**

The world we live in and the experiences we have in it.

To generalise out your findings to a larger, and perhaps different, population.

Areas of the body associated with pleasurable sensation and activity. Identified by Sigmund Freud.

These areas include the mouth, anus and genitals.

The biological study of animal behaviour.

An aspect of an adults personality usually identified as a peculiar behaviour which has been caused by under- or over- stimulation of an erogenous zone in childhood, or as a consequence of a parents attitude to a child getting pleasure from an erogenous zone.

The developing embryo**.**

Masculine or feminine specific behaviours.

The study of inherited characteristics.

An individual's collection of genetically inherited characteristics from their biological parents which may influence their physical, cognitive, social and emotional development.

A whole person approach in psychology. Understanding a person from all relevant points of view i.e. understanding a persons development taking into account the causes, effects and relationships between physical, cognitive, social and emotional changes and developments across the human lifespan.

An innate ability in many animal species which sees new-born attaching to the first large moving object it sees, by following it.

A personality disposition displayed in infancy e.g. a quiet baby; a demanding baby etc.

The biological 'hardware' in the brain that sees us innately want to acquire and develop language.

A psychological study into an individual or group of individuals over a least one year following physical, cognitive, social or emotional changes and developments.

The complete absence of mother-love in infancy which is felt can contribute towards social and emotional difficulties in later life.

Associated with our genetics, it is the biological ageing of our bodily processes and structures - often necessary before physical, cognitive, social and emotional developments can occur.

The unique mother-infant bond formed at birth.

A particular physical dexterity or ability related to biological maturation e.g. body manipulation, crawling, walking etc.

Those who believe that what we are, and what we can become is determined largely by our genetic inheritance. Our genetics, according to this position, will determine our physical make-up, cognitive abilities, social relationships and emotional behaviours.

Someone who follows in the psychoanalytic tradition established by Sigmund Freud in the early 1900s.

The first month of human life.

Those who believe that what we are, and what we can become is determined largely by our environment. Our environment can effect physical make-up, cognitive abilities social relationships and emotional behaviours.

Groups of people we most closely associate with i.e. friends, workmates; your community etc.

What our genetic inheritance *actually* becomes, physically, cognitively, socially and emotionally. This is strongly influenced by the environment we are brought up in.

Pre-birth. The nine months of human foetal development.

Those who look after, love and nurture us in infancy, childhood and adolescence.

Never having something in the first place. As opposed to *deprivation* - which means having something and then having it taken away from you.

The development of centres of the brain which allow for physical motor skills to develop.

Genetically determined biological body changes and developments over the course of the human lifespan.

A new-born's innate (inherited) reflex action to turn towards objects brushing against its cheek.

An idea of who you are as an individual.

How much you respect and value yourself.

A period in our life where we are most susceptible, and better able, to learn how to do something.

Physical, cognitive, social and emotional changes across the human lifecycle, some of which happen in identifiable and progressive stages (age-stage cognitive problem-solving and language abilities etc.) while others happen in a similarly identifiable but continuous manner (the ageing process, non-age stage development of personality etc.)

Brothers and sisters.

Our ability to interact, or mix, with others.

The causes and effects of an individual's social behaviours across the human lifespan.

The process we go through as individuals in learning our culture's rules, norms (acceptable behaviours) and values (beliefs).

Being able to think using commonly agreed symbols e.g. *words* for things found around us.

The causes, effects and inter-relationships between physical, cognitive and social development across our whole lifetime.

Lifespan Development Gigantic Wordsearch

infanttemperamentattachmentethology
chromosomesextrapolatecriticalperiod
languageacquisitiondevice(LAD)
cognitivedevelopmentimprinting
maternalprivationgenderphenotype
DNAaffectionlesspsychopathneonatal
stagedysfunctionmaturationholistic
longitudinalstudyegoocentricfixation
foetuscerebralcortexgenotypegenetics
monotropyemotionaldevelopment
erogenouszonessiblingsmotorskills
biologyrootingnatureperspective
peergroupprimarycaregiversphysical
developmentnurtureperspective
phenotypeprivationsymbolicfunction
pre-natalstageself-conceptselfesteem
sociabilitydevelopmentalpsychology
environmentsensitiveperiod
sequenceofdevelopmentneo-Freudian
whole-lifeapproachsocialdevelopment
psychomotordevelopmentsocialisation

5. Quick Quiz

a) Identify *four* changes which are *continuous and progressive* across the human lifecycle.

b) What name does developmental psychology give to the *approach* which studies these four continuous and progressive changes over the human lifecycle?

c) What three assumptions does this approach make concerning our development?

d) What perspective in psychology does the following describe: '*Our biology or genetics control and shape what we become physically, cognitively, emotionally and socially*'?

e) What is it's rival perspective called?

f) What is the *process of physical growth* called?

g) Name one *age-stage* related ability we mostly all develop from age two to five.

h) What do developmental psychologists call the period of growth from *conception to birth?*

i) With what cognitive process are *Broca, Chomsky* and *Wernicke* associated?

j) What needs to happen for individuals *before* they can cognitively develop?

k) Of what might *infant temperament* be a sign?

l) What do think the term *egocentric* means to a developmental psychologist?

m) If you think it is *30:70* and your classmate thinks it is *70:30* what are you discussing? To what do the figures refer?

n) Name the *process* where we *learn common norms, beliefs and values.*

o) What is *sociability*?

p) If *you know who you are, and who you are in relation to others,* you could be said to have a good what?

q) With whom is the term '*monotropy*' most associated? What did he study?

r) Name the *first three age-stages* in Erikson's theory of psychosocial development.

s) What aspect of being human does he think our social experiences can influence?

t) What is meant by the whole person or whole life approach in developmental psychology?

6. Answer the following questions

a) Describe the concept of *Lifespan development*. Your answer should identify at what ages and associated stages in our life we are most prone to age-related changes,
   - what these areas of psychological development and change are,
   - that these particular age-related changes are continuous and progressive and that they are all inter-related to one another.

b) What major physical change occurs at around age 10 for girls and age 12 for boys. Describe this. What relevance does this particular change have for social and emotional development?

c) What social and/or emotional effects might being employed or unemployed have for someone around age 20?

d) What is *maturation* and what role does maturation play in Lifespan development? Identify and describe an example of maturation from infancy. Do you think biological maturation is linked to cognitive, social and emotional growth and development? Give reasons for your answer.

e) Identify, describe and evaluate from the point of view of *Lifespan development* what is occurring in this summary of a longitudinal observation of a little girl.

> *At six months old Toni could stand and clutch onto furniture; it was however another six months before she could walk without assistance.*

CONCEPT 2 - COGNITIVE DEVELOPMENT

Information: Introduction

For the purposes of the Intermediate 1/2 developmental psychology optional key concept *Cognitive Development* SQA particularly emphasise:

- Piaget's stages of cognitive development
- the development of play behaviour
- challenges to Piaget.

The study of **cognitive development** is an *optional* key concept at Intermediate 1/2. Cognitive development is the study of how our brains are able to take in information from the outside world and what we do with this information. It concerns, how we create perceptions concerning our world, how we form and are able to retrieve memories; and, ultimately, how our cognitive development affects our actual behaviour. It is an area of study in psychology in general, and developmental psychology in particular, which has benefited from the work of **Jean Piaget**.

Jean Piaget was born in Neuchatel, Switzerland in 1896 and died in 1980. He was educated at, and received his PhD (doctorate) from the University of Neuchatel in 1917. His important works include:

- *The Origins of Intelligence in Children (1952)*
- *The Language and Thought of the Child (1952)*
- *The Psychology of the Child (1969).*

Mainly interested in the study of the development of thought and knowledge in human beings (**genetic epistemology**) he proved that children think differently from adults. This was contrary to what was previously thought. He believed the reason children think (and behave) differently from adults was because their brains continue to biologically mature throughout childhood. Quite simply, they cannot do certain things in the same manner as adults principally because they are not yet biologically ready to do so. Cognitive development is thus affected by **biological maturation**. All children follow the same **sequence of** (*cognitiv*e) **development**.

It should be noted that Piaget took 'cognitive development' to be the same thing as 'intelligence'. For Piaget, cognition (and therefore *intelligence*), is a biological process. He was consequently interested in the 'biology of thinking' and how it develops and unfolds as we biologically age and mature.

For him, children's intellectual development falls into certain identifiable **stages**. These stages are common to all children and all children go through them in the same order. Some children manage to go through a stage or stages quicker than others. This is evidence of **individual differences** in cognitive abilities. Individual differences are also evident in other areas of developmental psychology e.g. personality.

Cognitive development is seen as a *building block* process, where children have to be biologically mature before they can enter a particular stage. They master specific intellectual abilities during a particular stage, and having done so, if biologically ready, they enter and go through the next stage - which intellectually is different from the one which came previously. Most definitely, Piaget's theory of cognitive development in children is a age-stage related theory which emphasises the relationship between biological maturation, physical maturation and developing cognitive abilities. As shall be seen this development of a child's cognitive ability during infancy and childhood has social and emotional consequences.

What do you think?

Name two behaviours most children by age 2 have, which were not evident at birth. Why did they take time to develop?

Piaget's Theory of Cognitive Development in Children

Essential vocabulary

In order to appreciate the great contribution Piaget made to developmental psychology (and beyond), it is necessary that two important *Piagetian* principles are brought to our attention. These are **organisation** and **adaptation.**

Organisation

It is thought that an infant learns more in the first two years of its life than in the rest of its life put together. As an infant physically and cognitively develops, each must come across countless new learning experiences every day.

How does the infant deal with these experiences? **Organisation** is the term given to a baby's ability to order and classify these new experiences in the mind. Organisation is an innate process common to all infants. We are born with this ability to organise all experiences we come across. Piaget said we innately organise experiences into **schema**. A baby, when exposed to a new situation, or **stimuli**, e.g. daddy, cows in a field, buses, etc. uses its organisational ability to form schema representing this new stimuli. It will have in its head a **mental representation** or schema of 'daddy', cows, buses, etc. Our innate ability to organise our world into schema is our ability to *classify* and *categorise* objects, events, situations, etc. Organisation is the beginning of intellectual functioning for all new-borns. It is not learned, but biologically inherited or innate.

Adaptation

Adaptation is the infant's growing ability to understand its surrounding world. Adaptation cannot occur unless there is a schema already established regards the concept or aspect of its environment it is trying to understand and act upon. The two times table is completely meaningless to a child unless it has established a number schema!

Adaptation depends upon two mental processes which Piaget labels:

- **assimilation**
- **accommodation**

Assimilation is said to happen when a child behaves in a way which suggests it has formed a schema about a particular stimulus. Assimilation is more primitive than accommodation. Assimilation sees a young child generalise about its world on the basis of existing schema. For example, a toddler, whose name is Wilson, is being pushed through Kilmarnock and sees a bus. Wilson points towards it, obviously wanting to know what this big *Stagecoach* thing is! Mummy says 'It's a bus'. Thereafter, anytime Wilson sees a bus, he points at it and says '*Bus*'. Wilson has formed a bus schema. Unfortunately he also points at caravans, lorries and tractors classifying them as 'bus' as well! This is **assimilation** - a young child's ***general interpretation*** of their world ***based upon existing schema***. Wilson has not yet developed the mental ability to discriminate between stimuli, or things that look a bit like each other - but are different.

Accommodation is a more advanced form of assimilation. It is where the child *restructures* existing schema in order to accommodate similar but different stimuli in its world. It essentially changes its existing mental structure (formed by existing schema) so that new experiences can be added, understood and acted upon. Using the above example, accommodation is said to have happened when Wilson consistently and successfully points to buses, lorries and tractors and identifies them correctly. This is **accommodation** - a young child's ***specific interpretation*** of its world ***based upon restructuring existing schema***. Wilson has developed the mental ability to discriminate between stimuli that seem the same but are different.

The development of thinking depends upon our ability to change our mental structures to face new challenges in life. We are able to do this from a young age. What pushes us towards having to change old schema in order to accommodate our complex world is the tussle between **equilibrium** and **disequilibrium**. For a while at the **assimilation** stage, Wilson can happily interpret buses, lorries and tractors all as 'buses'. It is not a problem. His existing bus schema does quite well. As time goes on and Wilson is exposed to more and more buses, caravans, lorries and tractors, and on being corrected by his mummy, he realises that a bus *is* different from a caravan/lorry/tractor. This puts the existing 'bus' schema in his mind in a state of **disequilibrium** (imbalance) in that caravans, lorries and tractors are not buses. As a consequence **accommodation**, or the restructuring of existing schema, happens in order for Wilson to return to a state of **equilibrium** (or balance) in his interpretation of his world. On seeing a bus, caravan, lorry or tractor thereafter, he specifically identifies it correctly.

Piaget's stages of cognitive development in children

Identifying a sequence of cognitive development common to all children, Piaget identified four age-stages, each of which shows the development of distinct thinking, problem-solving behaviours and abilities not available to the child in a previous stage. This is because the child is not biologically ready and is therefore, unable able to deal

with the more complex problems each developmental stage contains. **Epigenesis** (in this instance, the biological maturation of our cerebral cortex) is therefore directly linked to cognitive development. This can be illustrated below.

Epigenesis and cognitive development

Between the ages of 0-2, biological maturation of our sense organs and sensory and motor areas of our brain occurs. This must happen before cognitive functioning takes place.

From age 2-7, it has been found that the areas of our brain concerning hearing and speech must mature before basic thought processes dealing with vocabulary, mental imagery (thinking in pictures) and understanding can happen. The development of language is an obvious example here.

From 7-11, our brains continue to mature and develop in order to bring our cognitive ability to a more adult level. We develop an ability to see other people's points of view and improve our social behaviours towards others. This was not apparent in the earlier years.

Finally at around age 11-13, our brains are thought to have finally matured to an adult level. We are able from this time to think abstractly about our world, reason logically and think in a scientific (or hypothetical) way. This also eluded us in the earlier years of life.

Cognitive stages of development

The sensori-motor stage (0-2)

The baby initially can only deal with its world using innate reflex actions such as **rooting** and sucking. There is a gradual increase in sensory and motor awareness i.e. vision, hearing and bodily movements. The baby has no realisation of the existence of anything outwith its own immediate experience. For example, if something is hidden from a baby's view, it no longer exists in their reality. This is what Piaget calls **object permanence**. He said that babies under 8 months had no object permanence. The concept of object permanence can be demonstrated quite simply. A ball is placed directly in the line of sight of a baby. It is moved to left and right. The experimenter knows that the baby is attending to the ball as its eyes are following its movements. When the ball is covered by a cloth, the baby no longer attends to it with its eyes and no longer reaches out for it. It has not yet developed object permanence (the knowledge that things *do* exist outwith and away from themselves). The baby is **egocentric**, in that it cannot understand that the world can be seen from a variety of **perspectives** (or points of view) other than their own.

The pre-operational stage (2-7)

As toddlers enter this stage in their cognitive development, egocentrism gradually disappears. This can be seen in their less self-centred behaviours after about age two or three. Object permanence becomes established. Children at the younger end of this age range (2-7) do not yet have an ability to **decentre.** This is being able to see the world as others do. As is evident in Piaget's Mountain study. Here Piaget presented

young children with an apparatus that had three papier mache models on it of three mountains. One of the mountains had a house on top of it. The second had a snow-capped peak. The third had a wooden cross at its summit. A doll was placed and moved (orientated) around the mountains base. Children were asked what they thought the dolly could see. Piaget found that children during the pre-operational stage could not decentre very well. They reported what their eyes 'told' them as opposed to what the dolly's point of view was.

The most interesting concept of **animism** begins to emerge at this time as well. Animism is where children give toys and playthings a life-like quality. Dolls, for example, are perceived as 'real'. Animism is very obvious in observations of children's play. They also have problems of **conservation** at the pre-operational stage. This is caused by only being able to take into account one aspect of an object or situation at any one time. Children between two and seven have, for example, difficulty understanding volume and number. This is demonstrated below.

Where a) and b) represent rows of chocolate buttons: If a child is presented with a choice between row a) or row b) s/he will choose row b). This is because row b) looks longer! The child can see one row of buttons is longer than the other, but cannot yet understand the significance of the spaces between each button. It fails to conserve number.

Where c) and d) represent a conservation of volume task: Both the tall and the fat glass are filled with equal amounts of lemonade. A child between two and seven, Piaget believes, if given a choice between c) and d) would invariably choose d). This is because to the child the tall glass looks as if it contains more than the smaller, but fatter glass. They are looking at the heights of the liquid, but not the shape of the glass the lemonade is contained in. They can only deal with one aspect of the stimulus at any one time. Students should note that Piaget thinks children at the pre-operational stage have difficulty not only conserving number and volume but also length and mass.

The concrete-operational stage (7-11)

By age seven, children should be able to understand the law of conservation - certainly regards number and volume.

They can now deal with **reversibility** of thinking. In the above example, this means being able to mentally move the lower row together, or to mentally move one amount of liquid from one glass to the other. This allows them to see that indeed the rows contain the same number of buttons and the glasses the same amount of lemonade. They can classify and order objects in a series (i.e. arrange things in size) and can understand relational problems i.e. A is larger than B which is larger than C. They begin to show an ability to think in the abstract - but only if the problem is put to them in a real meaningful way based on their own knowledge of the world. A child of around eight would be completely unable to make sense of the equation:

$$x > y;\ t > x.$$ What is the smallest, x, y or t?

but would be able to work out the following:

Nana is older than Mummy; Granny is older than Nana. Who is the youngest?

This is a *concrete* operation - which could not be done at an earlier stage. Concrete operational thinking is the young child thinking in the abstract, but using real life examples to help it work out complex issues. Another example is where a child between 7-11 may not understand the complexities of fractions when put in 'number' form e.g. ¼, ½, ¾, but may very well be able to understand if the fraction is put in 'real' terms like '*Half an apple and half an apple make.....?'* Concrete operational thinking will develop and refine up until the next stage where the child develops more adult-like thinking strategies and associated behaviours.

The formal operational stage (11-13)

This is the last stage in cognitive development. Children begin to develop and use abstract thought and scientific reasoning. Problems are approached in a more adult logical way. Teenagers can follow arguments and reason in a hypothetical way i.e. tackle problems which ask 'What if...?' Much of a secondary curriculum is geared towards the development of hypothetical and abstract thinking. There is some evidence to suggest that many who enter secondary school are not yet in a biological position to cope with abstract mathematical and scientific concepts. They still have to endure the curriculum nonetheless. As a consequence much of what they are exposed to in abstract subjects is lost to them. They are not yet biologically mature enough in a cognitive sense to deal with this type of thinking. This is one of the reasons why so many of the adult population feel uncomfortable when asked to think in number terms. They have not - even by their adult years - come through and mastered all aspects of formal operational thinking.

What do you think?

Can you identify aspects of the Scottish educational system which reflect much of Piaget's thinking regards cognitive development in children? Give reasons for your answer.

In your opinion was Piaget over cautious about what he thought children could or could not do at particular ages in their life? Why do you think this?

Criticisms of Piaget

While of immense importance to psychology and much respected for his contribution, Piaget can, and has been, criticised.

1. Piaget thought that a young child was egocentric and unaware of a world outwith its own immediate one. Margaret Donaldson (1978) says that an understanding of egocentrism and object permanence is not quite as simple as Piaget proposed. If egocentrism exists then *how* an object disappears should still see them engage in egocentric behaviour. She reran his ball-cloth experiment using a ball and a light switch. Instead of covering the ball with the cloth she turned the lights off in the room instead. In this instance babies reached for the ball even although they could not see it. This was confirmed by Bower and Wishart (1972). Bower suggests that the reason for this difference in egocentric/non-egocentric behaviour is not that the baby has no object permanence early in life - but because it is confused by a cloth covering a ball. The baby has not learnt that balls and cloths can be

manipulated this way. It is, by comparison, well used to lights going on and off in its world. It knows that if a light goes off, the things in its world still exist. The issue of object permanence or lack of it, at the sensori-motor stage is open to question. Experience seems to make a difference.

2. As regards decentering at the pre-operational stage, Hughes (1975) replaced the mountain and doll apparatus with a policeman and doll affair. Hughes found children were able to decentre (see the world through others eyes i.e. the policeman or doll) at an earlier age than Piaget imagined. One reason for this was that the apparatus used by Hughes was known to the children. The task made more sense to them. They knew what the objects were and could understand better what was being asked of them.

3. Similar criticisms can be made about Piaget's underestimation of children's conservation ability concerning weigh, number, volume and mass. Having experience of the things you are being asked to deal with, and being able to understand what is being asked of you appears to lower the age children can/cannot conserve. This would be apparent in nursery schools for example, where the pre-fives are daily encouraged to play with water; sand; plasticine etc.

4. Piaget only used a small number of children, including his own, in his research. He generalised out his findings to the whole **population** of children. This research strategy would be unacceptable today.

5. His *sequence* approach to children's growing cognitive development from birth to age 11/13 is firmly based in biological maturation of the cerebral cortex. His theory has been criticised as being anti-educational in that it implies that education can play little part in cognitive development until a child is biologically ready to move through or up a stage. Alternative psychological theories to cognitive development would suggest that education does have an important part to play in unfolding cognitive ability.

Piaget and play

Broadly speaking, the development of play parallels and is contained within each of Piaget's stages of cognitive development. As play becomes more complex and sophisticated, **Piaget (1952)** suggests that this is because the child is at the same time developing more complex and sophisticated thinking ability. Play for Piaget has little adult influence - it is their world, and not others. It is up to others (see for example Sylva and Parten to *specifically* relate play to cognitive development and **social interaction**).

At the **sensori-motor stage (0-2)** play is physical in nature. What this means is that a child's play activities will involve and encourage physical and motor skills. Piaget calls this **mastery play** and can be seen as a child crawls about its world, climbs on furniture, chews objects, takes objects and manipulates them, etc. It is attempting to master its own environment through active learning about all that goes to make it up. It learns through experience.

At the **pre-operational stage** (2-7) play becomes **symbolic.** The child begins to play in a make-believe or imaginary world. They will play at being someone else and use objects to represent something else - in order that their play world is more interesting. Seven-year-olds will adopt identities other than their own e.g. *Mummies and babies, teachers and children* 'in the game'. They are able to separate out their own real identity from the one adopted in a game situation.

At the **concrete operational stage (7-11)** children involve themselves in **rule-bound play**. They pick up the 'rules of the game' from older children and adults. This is for Piaget the beginning of social development for children. It is through a realisation that games played with others have to have rules otherwise they fall apart that children begin to learn the rules necessary to live and work successfully with others. They learn the need to give and take in social situations. They learn to be less selfish and individual and more co-operative and social. When they play during the concrete operational stage, children have a very narrow and strict interpretation of rules which they have learnt. They rigidly apply previously learnt rules to current situations - even when this is inappropriate. The author has often told Toni, his 8 year old daughter, that when she is playing at schools and adopts the role of a teacher whom she calls '*Karen Stanley*', that '*Miss Stanley*' should not constantly shout and give her 'pupils' a row all the time! Her pupils include her Big Teddy; Emily a large doll and an enormous multi-coloured caterpillar whom she insists is the best pupil in the class! This is **animism** in action.

Children have a very black and white view of the world and what, for them, is right and what is wrong. Moral development starts when the child begins to identify and apply the rules it sees as governing its world. These 'rules' are picked up from parents, siblings, relatives, teachers, etc. A child loves to test the power of 'rules' as can be seen when a five top seven year old 'tells on' someone else for breaking an apparent rule. As children get older they begin to see the need to bend rules, and sometimes forget them altogether!

This may have something to do with our biological predisposition for personal survival and the development of lying at around age four. All children appear to begin to lie at this age. As time and experience wears on, we get better at it! Lying is another survival tool that we somehow all exhibit at roughly the same age and use when threatened by others.

Children's interpretation of the world based upon strict rules becomes less rigid by the end of this stage. This is further evident in teenagers' behaviours in that their 'play' sees them, and their peer group, adopting their *own* rules concerning their social world. This is often at odds with the social and moral 'rules' desired by their parents - which during the early period of the concrete operational stage we accept wholeheartedly.

Other psychologists have similarly identified **sequences of development** concerning **play** behaviours. Using naturalistic observation of 120 children in Oxfordshire (observation of play as it happens in a playgroup etc.) **Sylva *et al* (1980)** propose that play can be categorised broadly into:

- challenging play
- simple/passive play.

Challenging play happens when a child is faced with a problem or has to achieve a goal e.g. build a toy house out of bricks. Simple play is where the child just plays as such. There are no problems to be thought through or overcome. She then identified four categories of play behaviours:

1. **Simple play** - just playing for playings sake. This would be things like riding a bike up and down a garden path.

2. **Complex play** - is constructive in nature. Examples of constructive play would be to build a particular structure from play bricks. It is essentially problem solving play like doing jigsaws, identifying objects in a picture, etc.

3. **Practice play** - is more the development of skills needed in adult life. It is reminiscent of 'play' in the animal world where playfighting among young animals is common. Practice play leads to learnt behaviours which are important to survival as an adult.

4. **Symbolic play** (make-believe or pretend play) - is play that sees children use objects to symbolise other things. A collection of books end-up on the floor become a cave, dolls, teddies, etc become real people. Sylva believes symbolic play to be the child's realisation that there is a difference between the real and imagined world.

   Pretend play will become evident in children from age four onwards. It would appear that the early onset of imaginary play is linked to the enriched, or otherwise, environment a child is brought up in. Make-believe play encourages imagination and related language and creative thinking ability. It helps shape social skills and the development of personality. The imaginary world of the child is a world of magic. It is to be encouraged.

Simple play is an outlet for a child's energies and is a source of pleasure for them. More challenging play has developmental function regards skills needed later on in life. Sylva disagrees with Piaget in that she does not believe that children naturally progress through a sequence of play-stages. She also thinks that adults and older children have a greater influence than Piaget believed especially in the development of social behaviours.

Another psychologist, **Parten (1933)** appears to confirm much of Sylva's work, and also adds to our understanding of play as proposed by Piaget. She observed 42 children from two to four-and-a-half at play in a nursery school, each, for 60 one minute sessions. In general it was found that the older the child the more complex the play behaviour. For Parten, play develops in five stages.

1. **Solitary play**: in their early years children play in isolation from each other. They play alone seemingly uninterested in what others are doing.

2. **Onlooker play**: is where the two-year-old child begins to observe what others are doing. They show an interest and may react to what they see.

3. **Parallel play**: is imitating others play activities.

4. **Associative play:** is where two young children play together by sharing toys etc. It is early

5. **Co-operative play**: which involves playing directly with others. Occurring around age five it can involve helping others do something, or taking turns in the game, to be a baby or a mummy, to be a teacher or a pupil etc.

Play then is most important in a child's development. It is influenced by what they see others around them doing and is particularly important to the development of physical ability, cognitive skills (thinking; problem solving, imagination, creativity, language), social behaviour and related emotional development such as personality. Influences on the developing social world will be returned to in looking at the work of Vygotsky and Bruner.

Challenges to Piaget

Some psychologists feel that much of what Piaget proposes is difficult to test scientifically. This is because Piagetian concepts like *organisation, assimilation, accommodation, equilibrium* do not exist in reality. They are (for behaviourists) merely *names,* or **hypothetical constructs**, given to what are thought to be the human mental functions involved in cognitive development.

The main thrust of criticism comes from the **behaviourists**. Their bottom line is that if you cannot measure something objectively it does not exist in fact. If something does not exist in fact, the study of it is more the realm of philosophy as opposed to science. This came from the work of the early American behaviourist **John Broadus Watson** who in 1913 said that if psychology wants to be a science it must use experimental research methods much like physics, chemistry and biology. Psychological enquiry should only, in his opinion, be concerned with human behaviour - not hypothetical constructs *thought* to apply to the workings of the human mind. His emphasis on the study of behaviour, instead of the mind, is because behaviour is *real.* Our behaviour can be seen to happen and therefore can be accurately measured. Accurate, objective measurement, or **empirical data** is the mark of a true science.

Behaviourists think much of what we learn is a result of our interaction with our environment. It is through these everyday experiences that children learn various types of behaviour like how to get along with others, pass exams and cope with new and novel situations. Children's behaviour as a consequence of learning in, and from, their environment is known as **conditioning**. The influence of conditioning (learnt behaviours) became apparent to Watson after he read the work of **Ivan Petrovitch Pavlov** (1849-1936) a Soviet Nobel Prize winning physiologist, who advocated that **organisms** learn particular behaviours over the course of time by associating one event with another.

Using dogs as his **subjects** Pavlov found he could stimulate their salivary glands by putting food powder in their mouths. The amount of saliva produced was then measured. The saliva produced was a **reflex action**, or **unconditioned response** (unlearnt)**,** to food (the **unconditioned stimulus**) being placed in their mouths. He then began to notice that his dogs *also* salivated whenever their keepers appeared with their meals. Could this salivation be a clue that they had **learnt** that the appearance of their keepers meant that they were just about to get fed? Had the dogs learnt to predict that one event will follow another? Put another way, had the dogs become **conditioned** to expect that a particular stimulus (the keepers) would lead to a particular response (being fed)?

In an attempt to try and understand this better he set up a **laboratory experiment** the results of which would eventually give psychology a great insight into how we learn as individuals. Pavlov's work gave rise to his theory of **classical conditioning**. He knew from his earlier work that an **unconditioned stimulus** (food powder) led to an **unconditioned response** (salivation) for his dogs. He wanted to know if he could condition, or teach, his dogs to salivate to another completely unconnected stimulus - called a **conditioned stimulus**. He put his dogs into a cage and followed the procedure below.

Pavlov's Theory of Classical Conditioning

Before conditioning

Food put in dog's mouth ---------->dog's salivate
(the **unconditional stimulus: UCS**) (**unconditioned response: UCR**)

then

Pavlov rang a **bell**)---------->no response (the dogs did not salivate)
(called the **neutral stimulus**: **NS**)

During conditioning

Bell rung/**food** given *at the same time*--------->dog's salivate
(**NS + UCS**) (**unconditioned response**: **UCR**)

After conditioning

Bell rung ---------->dog's salivate
(the **conditional stimulus**: **CS**) (**conditioned response**: **CR**)

Conditioning, or learning, is said to happen when the dog responds (conditioned response) to a previously neutral, or unconnected, stimulus (NS), referred to after conditioning as the conditional stimulus - the stimulus to which the unassociated behaviour has become conditioned.

Some interesting points about classical conditioning

1. Pavlov discovered that dogs are not daft! What is meant by this is that he found out that after conditioning his dogs only responded (salivated) to the sound of the bell temporarily. After a while on hearing the bell they did not salivate. It was as if they realised that they were being conned. When an organism does not

conditionally respond to a conditioned stimulus, this learnt stimulus-response connection has been broken or is be *extinguished*. Pavlov emphasised that **reinforcement** is needed to keep the learnt response happening when the organism comes up against the conditional stimulus. Put simply, after conditioning every so often the dogs had to be presented with the bell *and the* food, otherwise they would not salivate to the bell alone.

2. If the learnt, or conditioned, stimulus-response connection *does* become extinct i.e. that bell----->salivation no longer happens (because the reinforcer of food is removed), Pavlov found that after a period of rest, when the conditional stimulus *(bell)* is re-presented, the condition response (*salivation*) may occur. This is called **spontaneous recovery**.

3. He found that his dogs would, initially, conditionally respond (salivate) to bells which had slightly different tones to that of the original bell. He also found the more like the original bell-tone other bells had the greater the amount of salivation produced. This he calls **stimulus generalisation.**

4. Pavlov further discovered that over time his dogs went from stimulus generalisation to **stimulus discrimination**. Experience allowed them to discriminate between bells of different tones. They would only respond to the tone of the original conditional stimulus bell.

Watson on reading Pavlov's work believed that the conditioning process was the explanation to all human behaviours. For Watson, and other '**hard**' **behaviourists**, human behaviour is explained in terms of learnt responses to stimuli in our environment. All behaviour is the product of environmental learning. Classical conditioning - learning that one event follows another - is central to the behaviourists understanding of all aspects of our behaviour.

To go some way towards proving that behaviour - both 'normal' and 'abnormal' is solely the product of learning Watson conducted his famous 'Little Albert' experiment.

Watson & Raynor's (1920) 'Little Albert' experiment

Watson and Raynor wanted to find out if a phobia could be learnt, or induced. The unwilling **participant** in their questionable study was a nine-month boy called Little Albert. Albert had a pet white rat. Everytime Albert played with the rat, Watson and Raynor whacked a hammer off a steel bar. This startled Albert! So much so that he very quickly became 'conditioned' to responding in a distressed state, by crying and trying to crawl away, when the stimulus of his rat was brought to him.

He had gone from a previously happy response to the stimulus of his rat, to a learnt (conditioned) distressed response to it. Watson and Raynor have induced a fear response to the rat stimulus. Watson and Raynor had 'proved' that phobias could be learnt. It was not until the 1950s however, that behaviourists began to look at very useful therapies to help people 'unlearn' behaviours which caused them, and others, a problem.

BF Skinner (1904-1990)

No discussion on behaviourism, however brief, would be complete without mentioning another American psychologist called Burrhus Frederic Skinner. Also a behaviourist he extended Pavlov's work in his theory of **operant conditioning**. Using cats, rats and a piece of apparatus which has become known as a **Skinner Box**, he was able to prove that an organism can be encouraged to perform a particular behaviour if it has been rewarded for it in the past. Similarly, an organism can be discouraged from a particular behaviour through the use of punishment. Simply put, *reward*, or the use of **positive reinforcement**, *encourages positive behaviours*; *punishment*, or the use of *negative reinforcement* discourages negative behaviours.

What do you think?

What classically conditioned behaviours can we observe in an infant?

From your own experience what rewards have been/are used with you to encourage positive behaviour; what punishments have been/are used with you to discourage negative behaviours?

Do they work? If so why? If not, why not?

Alfred Bandura's contribution to 'How do children learn'?

Born in 1925 in Canada, Bandura is best known for his **social learning theory**. He was critical of behaviourism in that he thought the behaviourist understanding of how we learn - through classical and operant conditioning - was too far removed from real life situations. Behaviourists generated their learning theory in a laboratory using animals. They then 'jumped' the theory to apply to human beings. For Bandura, this was too much. He went about observing children's behaviour in real life situations to try and discover if learnt human behaviour was more complex than classical and operant conditioning alone. His *social learning* theory is based upon a belief that children learn by observing the behaviours of others. For Bandura, children learn more by **modelling** their behaviour on others. They learn via **observation** and **imitation**. This is especially the case regards gender role and the development of moral thoughts and behaviours.

In a series of studies, **Bandura *et al*** showed how, and in what circumstances, children learn behaviour through **observational learning**. They, for example, would bring five-year-old children separately into a room (the **experimental group**) where each would see an adult **model** playing with various toys. Each saw the adult suddenly turn and assault an inflatable Bobo doll. They saw the adult model knock it over, sit on it and punch it on the nose. They then proceeded to smash it over the head with a large wooden mallet. Finally he would throw and kick the doll up in the air, while shouting, *'Sock him on the nose, hit him down, throw him in the air, kick him pow!'*

Shortly after this, each child was aggravated and deliberately made angry by having an attractive toy teasingly withheld from them! At the same time, another group of five-year-olds who had not seen the adult model's behaviour (the **control group**) were similarly made angry. The adult model left and all the children were put into the room

with the Bobo doll, wooden mallet etc. Observing via a two-way mirror Bandura rated the behaviour of the children. He found that his experimental group (those who had seen the adult model) copied the adults behaviour almost identically. He was in a position to say now that children do learn by observing, imitating and modelling the behaviour of others.

However, importantly, and contrary to what the behaviourists thought, learnt behaviour does not need any kind of reinforcement. Having established that learning can occur in the absence of reinforcement, **Bandura and Walters (1963)** set about to try and determine the role, if any, reward and punishment has in the learning process.

Three groups of children saw three different films of a model yelling and punching the Bobo doll. One film ended with the model being praised for his behaviour, one ended with the model being punished and the third concluded with the model being neither praised nor punished (no **treatment**). Each group of children were left alone in the room and observed via the two-way mirror. They discovered that the Praise Group children behaved more aggressively than either the punishment or no treatment groups. The Punishment Group behaved least aggressively than either the praise or no treatment groups.

In a later phase of the experiment the children were told they would be rewarded if they did everything they saw the adult model do in the film. Differences in behaviour between the praise and punishment groups disappeared almost immediately!

What this suggests is that reinforcement does not need to be present to acquire a behaviour - observation, imitation and modelling of another is enough - but *if* reward or punishment is used, the behaviour of the child can be influenced in part. Nowadays, social learning theory has been extended into the area of cognitive social learning theory which emphasises the child's developing ability to *actively* process information coming to them from their environment. We act upon our environment, it in turn acts upon us. The experience of this is thought about by the child, and is used by them to deal with the same and similar situations later on.

What do you think?

Throughout 1999, a secondary school in Wales gave points to pupils for attending school on a regular basis. Points made prizes in that pupils who had a good attendance record won a weeklong adventure holiday. Truancy rates fell dramatically. What aspect of behaviourist theory did this school successfully apply?

What might teachers have to do from time to time throughout the school year to keep truancy rates down to 1999 levels.

When at secondary school many people take unofficial time-off. This is not to be recommended, if only because we know that if we get caught some sort of punishment will be coming our way.
Why then do we do it?

If you saw your best friend jump fully clothed into a river, would you do likewise. If not, why not? What major criticism might be made about social learning theory? Why might a knowledge of cognitive social learning theory provide a better explanation of this scenario?

Cognitive social learning theory

Vygotsky and Bruner: Learning and Our Social World

In consideration of challenges to Piaget's theory of cognitive development in children, Intermediate 1/2 sees the work of Vygotsky and Bruner, with their emphases on *learning and the child's social world* as important. The influences coming from Vygotsky and Bruner have allowed for the development of what is called cognitive social learning theory in psychology.

Lev Vygotsky (1896-1934)

Unlike Piaget (who thought cognitive development was based on biological maturation), **Lev Vygotsky**, a Russian psychologist believed that cognitive development was more influenced by the social world we live in. Underlying the theory is Vygotsky's observation that our mastery of the essentials of life is often initially beyond us. We need help. This help comes from others i.e. mum, dad, older siblings teachers etc. The assistance they give us Vygotsky calls **scaffolding**. Scaffolders nourish the seeds of cognitive ability and potential. The 'fertiliser' they use - in a psychological sense - is **language**.

Scaffolders use language to describe and explain our complex world to us. The better use they make of language in the description and explanation of phenomena helps our understanding. Your teachers and lecturers, as scaffolders in the development of *your* knowledge of psychology, will use the richness of their language skills to explain and describe matters psychological to you. Their further use of anecdotes, stories and games will also help you to understand better the science of mind and behaviour. We use (internalise) other peoples *interpretation*s of life as they see it to help us problem-solve, then, and in the future. You, for example, will probably use the language and explanation of Piaget's theory of cognitive development from these notes in an assessment - and will also apply it in an everyday sense to help your understanding of your own and your childrens' cognitive development.

We use other people's explanations as our own inner speech and verbal thoughts. The point here is fairly obvious. If something is poorly explained to us this affects our present understanding of it - plus any future understanding of related, more complex, issues. This is illustrated below in consideration of a question often asked by young children.

Where do babies come from?

*Children are not stupid creatures. They are **active learners**, or **apprentices**, full of enquiry about the world they see around them. Around age 5/6 they very often ask a parent 'where do babies come from?'. This often causes concern for a parent. If a parent explains 'babies' from the point of view of a baby being like a flower in that it grows from a seed in mummy's tummy, this very often satisfies the child's understanding at that time about an important aspect of it's life.*

Evading the question does not aid the child's need for understanding (maybe as a consequence it will not seek advice on sex from this parent again?). The flower/seed story helps the child cognitively mature at age 5/6 and later on to understand the biology of foetal conception and development.

The ***gap*** between an individual's ***actual* ability level** and ***potential* ability** regards task/skill/concept mastery is called their **ZPD** or **zone of proximal development**. The richness of help got from *scaffolders* helps the child maximise its potential within any particular ZPD. ZPD's differ from person to person. They are affected by a person's genetics, environment and interaction of both. If, for example, a 7 year-old Scottish boy has a better-than-average football ability and this is recognised and encouraged by a primary school teacher who herself has a coaching background, with support and encouragement from family and friends, later secondary school teachers and boys' club officials, the boy may one day end up day playing professional football, if not for the 'Old Firm'(!), a premiere league club. If, on the other hand, potential ability is not encouraged, the boy may never even kick a ball for a Sunday League pub team let alone club and country.

For Vygotsky, it is therefore a child and young person's social world that influences cognitive development more so than biological maturation.

Bruner

Jerome Bruner (1964) was much impressed by Vygotsky's work, especially the influence of scaffolders regarding children and young people's maximisation of cognitive potential and cognitive development. He, however, shared similar beliefs to that of Piaget. He accepted we are born with a biological predisposition to organise our world and that biological maturation of the cerebral cortex affects thinking ability. His contribution to cognitive development concerns the ways children think about their world. He says children have to develop progressively more sophisticated *forms* of knowledge in their minds to help them think and deal with life. The more complex they discover their world to be as they get older, the greater the need to use more

complex ways of thinking (representation) about it. As a consequence Bruner says children use three different ways or**, modes of representation,** to think about their environment. These are:

- **the enactive mode:** occurring at the same time as Piaget's sensori-motor stage (0-2). The infant thinks in and uses the inactive mode, or form of representation, to think about it's world. Their world is represented (thought about/dealt with) in terms of their sensori-motor actions. This sounds complicated but all it need mean for us is that infants use a lot of gestures, facial expressions and obvious emotions (crying, laughing) which mean something for them in their simple environment, and which others are able to interpret and act upon.

- **the iconic mode:** is the growing child's use of *mental imagery* to think about, deal with and **represent** their world. Showing itself just before the onset of language, the infant begins to form mental pictures to represent and remember people, objects etc. in their environment. This is necessary because their world is becoming more complex. Gestures just will not do anymore. They begin to store *visual images* or mental pictures of their world in their cerebral cortex.

- **the semantic mode:** is when the child begins to represent or think about the world using **language.** Language is important in that it allows the young child to enquire, think about, deal with and act upon their environment. For Bruner, being able to use the semantic mode, or *form of representing knowledge,* to deal with the world is the key to intellectual growth and development.

SUMMARY: OPTIONAL KEY CONCEPT: COGNITIVE DEVELOPMENT

Until relatively recently, 'cognitive development', certainly in developmental psychology, was heavily influenced by Piaget's theory of cognitive development. Piaget sees cognitive development mainly in terms of 'intelligence' and intellectual stages of development. These intellectual age-stages of cognitive development are common to all children and all children have to go through them. Some however may go through a stage quicker/slower than others. This is evidence of individual differences in children's cognitive abilities and development. Central to Piagetian thought is the role biological maturation plays in moving all children from one level of intellectual development to another.

The influence of the social world with regard to cognitive development was only briefly considered by Piaget when he looked at the influence of play on the developing child. Play reflects the child's ability to deal with, and learn from, its social world. Play behaviour develops in sequences reflecting the young child's awareness of its social world. Play is influenced by what children see others around them doing. It is particularly important to the development of physical abilities, cognitive skills (thinking, problem solving; imagination creativity, language etc.), social behaviour and related emotional development such as personality.

While biological maturation *is* important - the influence of the environment on a child's cognitive development must also be considered. Behaviourism suggests that we learn via classical and operant conditioning and that, cognitively, we are the sum total of stimulus-response units of learnt behaviours. This was ultimately felt to be a bit over-simplistic, especially as most of the research into conditioning (learning) had taken place in a laboratory using animals such as rats, cats and pigeons. Human beings, it was felt, are more than this.

The social environment as it affects, for example, social and moral development appears to have a strong influence on cognitive development. *How* we think about our learning experiences coming to us from our world, or cognitive social learning theory, has to also be considered nowadays. The influence of biological maturation and genetic inheritance *plus* our environment and the significant people in it should *all* nowadays be taken on board by developmental psychology in attempting to understand cognitive development. Cognitive development is *now* understood to be influenced by our biological maturation *and* genetic inheritance as we *interact* with, and *actively learn* from, experiences in our *environment*.

GLOSSARY: COGNITIVE DEVELOPMENT

accommodation: more advanced form of organising our world. Piaget says we create schemas (mental structures) about our world, first simply (assimilation), but realise as we develop that all we come across cannot quite 'fit in' or be dealt with by these existing simple schemas. We therefore adapt or change existing schema to accommodate new information from our increasingly more complex world.

animism: evident in childhood play - especially during Piaget's pre-operational stage. Animism is where children give a living personality to teddies, dolls, toy soldiers etc. Animism gives us a clue as to how young children perceive their world.

apprentices: term used by Vygotsky to describe children as active learners. It implies that children need help to maximise the development of their cognitive skills, abilities and competencies. Help comes from parents; caregivers; older siblings; teachers; the peer group etc. Piaget sees children as 'scientists' who cognitively develop by testing hypotheses in/about their environment. Vygotsky takes a more cautious approach, by suggesting they are apprentices who need assistance from others.

assimilation: a simple form of organising information about our world (see accommodation). Piaget says that assimilation occurs when we create a mental schema about something in our world. Assimilation sees a child deal with their world in terms of existing schema. After a while the child comes to realise that its existing assimilated schema is inappropriate to deal with it's growing knowledge of the world. It changes or creates new schemas as a result (accommodation).

Bandura, Alfred: Canadian psychologist who advocated social learning theory as another way of looking at how children learn from their environment. They learn certain behaviours by observation, imitation and modelling of others.

behaviourists: sometimes called the *first force* in psychology. Behaviourism emerged as a reaction to psychoanalysis (*second force*) because it felt psychology should be about actual observable behaviour, as opposed to the unobservable and inaccessible contents of the human mind, which they felt, were private and personal to an individual. Behaviourism became very strong by the middle of the 20th century in the USA and has had a tremendous influence on psychology worldwide. Behaviourists such as Pavlov, Watson and Skinner gave psychology an understanding of learning from the point of view of conditioning. They say we learn as a consequence of classical and operant conditioning, and that individuals can be seen as the sum total of learnt stimulus-response (S-R) units of behaviour.

Bruner, Jerome: a psychologist who says children's intellectual development depends on *how* their minds use the information it receives. He identified *enactive; iconic* and *semantic* types of thinking used by the growing child to represent their world.

classical conditioning: discovered by Ivan Pavlov while working for the Soviet secret service, classical conditioning, or classical learning, is where we as organisms learn that one event (a stimulus) will predict another stimulus or event. Pavlov first noticed classical conditioning when he observed that dogs in his laboratory salivated at the sight of their keepers. They had learnt that their appearance meant that they were to be fed.

conditioned/conditioning: behaviourist term for learning

conditional stimulus: a stimulus you teach a participant to respond to in some way or other. Pavlov conditioned his dogs to salivate when they heard the *conditional stimulus* of the bell.

cognitive development: includes perception; attention; language; memory and thinking (or problem-solving). Developmental psychology has been particularly interested in what influences thinking and intellectual development. First thought to be dependent on biological development and genetic endowment developmental psychology now realises that our environment plus the active learning experiences we get from it all contribute to cognitive development.

concrete-operational stage: Piaget's third stage of cognitive, or intellectual, development between the ages of 7-11. The concrete-operational stage is identified in the developing child's ability to think more abstractly about their world. They solve problems using abstract reasoning such as reversibility and simple hypothesising.

conservation: a child's ability to understand physical aspects of their world such as number; volume; length; weight and mass. The child's ability to conserve begins to develop at the end of the pre-operational stage (2-7).

control group: in order to allow us to narrow down the possibility of error in psychological experiments we very often have two groups of people taking part which helps us make comparisons between them. One group we call the experimental group, and the other we call the control group. The experimental group are given a 'treatment' of some kind while the control group go without. Both groups are then tested for performance. If the experimental group significantly do better/worse on the performance measurement than the control group, we are more confident that there is a connection (cause-effect) between the treatment given and performance.

decentre/decentering: a young child during the pre-operational stage will begin to decentre, or show they can see the world from other people's point of view. Up until then they are egocentric, only seeing the world from their own viewpoint.

disequilibrium: a Piagetian term referring to a child during accommodation where they are changing/forming new schema in order to deal better with their world. Old schema just won't do.

egocentric: a child's inability to see the world from another person's point of view. When they do, they are said to now be able to decentre. See Jean Piaget's 'Mountain Study'.

empirical data: results got by careful experimental research, as opposed to just thinking (philosophically) about an issue.

enactive mode: Jerome Bruner's notion as to how children first 'represent' or think about their world. The enactive mode sees a baby, for example, represent and deal with its environment using sensori-motor behaviours.

Epigenesis: epigenic principles. The unfolding of our genetic blueprint. The biological trigger necessary for the onset of physical; cognitive social and emotional development and change. The fact that biological development is necessary before other physical; cognitive and emotional developments can take place e.g. walking, where a baby has to biologically distribute body mass, build muscle etc before it can toddle. The onset of puberty is another example of epigenic principles in action.

equilibrium: a Piagetian term where a child is said to be assimilating with it's world. It is dealing with it's environment in terms of *existing* knowledge structures or schema.

et al: Latin term used in psychology which means '*and others*'.

experimental group: see control group. The experimental group in psychology is a group of participants who are given some kind of 'treatment' which allows comparison with a control group who do not get any treatment.

formal operational stage (11-13): the last stage in Piaget's theory of cognitive development. By this stage children can deal formally with their world; they can think and reason logically, hypothesise etc. Interestingly, there is some evidence that a few people do not successfully acquire formal operational thought especially that of working with abstract numbers.

genetic epistemology: the study of the growth of thought and knowledge in relation to evolutionary biology.

hard behaviourists: Watson, Skinner, Pavlov, etc. These early behaviourists saw *all* human behaviours as a consequence of learnt S-R (stimulus-response) units of behaviour. We are what we are, and become what we become, as a result of learning.

hypothetical constructs: a phrase used in psychology which gives names to things which do not exist in reality (and consequentially are very hard to measure/observe) e.g. perception.

iconic mode: Jerome Bruner's idea that children as they get older (2+) begin to think and deal with their world using mental *images*.

imitation: The Canadian psychologist Alfred Bandura proposed in his social learning theory that children model their behaviour on others that they see by imitating them.

Pavlov, Ivan Petrovitch: Soviet Nobel Prize winning physiologist who's work with dogs saw him putting forward a leaning theory regards classical conditioning. Classical conditioning is where we learn that one event will follow another; or that one event predicts another.

Piaget, Jean: Swiss psychologist (1896-1980) whose main contribution to psychology is that cognitive development (notably intelligence) occurs in stages for children. Children cannot do certain cognitive tasks until they are biologically ready.

laboratory experiment: major research method used in psychology, especially by behaviourists and their modern day equivalent. A laboratory experiment is characterised by the scientists *control* of extraneous variables in order to work out any cause and effect relationship between an independent variable (the one which is manipulated or changed) and a dependent variable - the one which is measured or observed.

language: a cognitive process identified as particular to human beings.

mastery play: play, as considered by Piaget was seen as important as it helps a child practice and develop skills and abilities. He thought children go through a sequence of development regards play behaviours. Mastery play is the first where the child repeats, in play, behaviours in order to master them

mental representation: the images we use in our minds to represent or think about our world

model: term used by Bandura to identify the person whose behaviour the child is imitating

modelling: the process of imitation.

modes of representation: ways of thinking about our world. See Jerome Bruner.

object permanence: Piaget's observation that a very young child appears to deal with their world in the 'here and now'. If they cannot directly see or experience something, it does not exist. See Piaget 'ball and cloth' experiment.

observation: a popular research strategy used in psychology. Observation is of three kinds. Natural observation which sees a psychologist directly observe a situation in nature (as it happens). They do not/cannot exercise any control in a situation of natural observation. Natural observations might be looking at play as it happens within a school playground. Participant observation is where a psychologist sets up and takes part in an observation with his/her participants e.g. Piaget's Mountain Study. Non-participant observation is where a psychologist will set up an observation, but observe what happens from afar e.g. via a two-way mirror; as a bystander taking notes e.g. Bandura's Bobo doll. In observations there is no manipulation of an independent variable.

observational learning: Bandura's term for the process of learning certain behaviours by a child as it observes and imitates the behaviours of others.

operant conditioning: attributed to a major player in behaviourism, BF Skinner. Skinner believed that we are encouraged towards certain behaviours by the use of positive reinforcement (reward) and discouraged from certain behaviours by the use of negative reinforcement (punishment).

organisation: an innate or inborn ability to organise information about our world identified by Jean Piaget.

participant: more modern term used to signify people who take part in psychological research. Previously referred to as subjects.

pre-operational stage (2-7): Piaget's second stage of cognitive development in children. Important aspects of the pre-operational stage are conservation of number, volume, length, etc, animism; egocentrism and decentering

positive reinforcement: behaviourist term attributed to BF Skinner which means the use of reward to encourage particular behaviours.

reflex action: or **unconditioned response** is a Behaviourist term concerning any response which is produced by an organism whenever an unconditioned stimulus is present. In Pavlov's famous experiment into classical conditioning, the unconditioned response was salivation, when food powder (the unconditioned stimulus) was put into each dog's mouth.

reversibility: at the concrete operational stage of cognitive development, Piaget believes we develop reversibility. Reversibility is our mental ability to move concepts around in our minds in order to solve problems. It might be seen in a child of between 7-11 when they are presented with two (undisclosed) half pint jugs of water and are asked to work out without touching anything whether or not the two half-pint measures will 'fit into' a third jug of undisclosed size.

rule-bound play: develops according to Piaget during the concrete-operational stage of cognitive development. It is where the developing child begins to appreciate that in order to work, play and live together rules are necessary to govern people's behaviour.

sequence of development: physical, cognitive, social and emotional changes across the human lifecycle, some of which happen in identifiable and progressive stages (age-stage problem-solving and language abilities etc.) while others happen in a similarly identifiable but continuous manner (the ageing process, non-age stage development of personality etc.)

scaffolding: attributed to the Soviet psychologist Lev Vygotsky. He believed that cognitive ability depended very much on what we learn from our social world. Scaffolding is the support we get as children, teenagers and adults to help us develop whatever potentials we have. Scaffolding comes from parents, brothers and sisters teachers or indeed anyone who has a significant positive influence on the nurturing of cognitive development in individuals,

schema: an organised structure or bundle of knowledge we have about aspects of our world which can change with age and experience. Piaget thinks our ability to organise our world on the basis of schema is innate.

semantic mode: a term used by Jerome Bruner to identify how infants and children develop ways to think about their world. Thinking about the world using the *semantic mode* occurs when children begin to think, or *represent*, their world using language. Language is important in that it allows the young child to enquire, think about, deal with and act upon their environment. For Bruner, being able to use the semantic mode, or *form of representing knowledge* in a meaningful way to deal with the world, is the key to intellectual growth and development. Semantic thinking turns on language.

sensori-motor stage (0-2): Piaget's first stage of cognitive development from birth to age 2. Initially the baby can only deal with its world using innate reflex actions such as rooting. A baby has no knowledge of a world outwith and away from itself. If it can't see an object, that object no longer exists in the babies mind in relation to it's world. This egocentrism gradually diminishes during this stage as the infant develops object permanence

sequences of development concerning **play** behaviours. Sylva (1980) and others propose that play can be categorised broadly into challenging play, and simple/passive play. She identifies four categories of play behaviours 1 Simple play 2 Complex 3 Practice play 4 Symbolic play. Another psychologist, Parten (1933) confirms much of Sylva's work. For Parten, play develops in five stages. 1 Solitary play 2 Onlooker play 3 Parallel play 4 Associative play 5 Co-operative play. The development of play behaviours and strategies influences cognitive, social and moral development. Personality is also affected.

Skinner, BF: Burrhus Frederic Skinner (1904-1990) was an early behaviourist whose theory of operant conditioning has been hugely influential in understanding how we learn behaviours from early infancy onwards. For Skinner, the use of reward (positive reinforcement) will encourage the repetition of desired behaviours and the use of punishment (negative reinforcement) should discourage unwanted behaviours. Operant conditioning is very obvious in all aspects of life. It is used by parents in the home; teachers in school and society in general.

Skinner Box: apparatus used by the behaviourist BF Skinner to develop his theory of operant conditioning. It is a cage like structure that contains a food delivery chute and a lever. A rat would be put in the box. First it explores its environment and will investigate the lever. It pressed it once and food is delivered.

When the rat is later observed to *successively* press the lever to obtain food, this is taken to be proof that learning has occurred. The rat has come to associate the pressing of the lever with the delivery of food. Food is the positive reinforcer that will see the rat press the lever thereafter.

social learning theory: attributed to the Canadian psychologist Alfred Bandura, social learning theory believes that children learn social behaviours by modelling themselves on others using imitation and observation. What they see adults do is especially influential on children.

stages: developmental psychology has a special interest in finding out what physical; cognitive social and emotional changes happen is stages during our life and what changes happen continuously. Changes that occur in identifiable and distinct stages in our life would include the cognitive development of language. A change that occurs in a continuous fashion would be ageing.

stimuli: an object, event, situation etc. which we come across in our environment and to which we normally respond in some way. For example, if it rains (the environmental stimulus) we put an umbrella up (the organism's response)

symbolic play: Sylva *et al* (1980) report that play behaviours develop in a sequence of stages. Symbolic play is imaginary, make-believe or pretend play that becomes more and more evident in children from four onwards. It is play which involves children using objects to represent other things e.g. a brush handle being used to ride around on because it represents a horse: a collection of books end-up on the floor which become a cave: dolls, teddies etc which become real people. Sylva believes symbolic play to itself represent the child's realisation that there is a difference between the real and imagined world. Make-believe play encourages imagination and related language and creative thinking ability. Symbolic play helps shape social skills and the development of personality.

spontaneous recovery: Behaviourist term associated with Pavlov. In the absence of reinforcement, the desired response to a conditional stimulus will disappear. This is known as extinction. Occasionally however, after a period of rest, the organism may once again respond to a conditional stimulus when it is presented. This is called spontaneous recovery.

treatment: when used in the context of psychological research '*treatment*' is the giving of something to an experimental group to see whether it has any effect on behaviour. If you were trying to measure the effect alcohol had on reaction time you would give measures of alcohol to people and test their reactions as a consequence. The measures of alcohol are the 'treatment'.

Vygotsky, Lev: Soviet psychologist (1896-1934), who emphasises the importance of social interaction with others as the key to cognitive development and fulfilment of whatever zone of proximal development an individual might have.

Watson, John Broadus: American founding father of the behaviourist school in psychology**,** who, in the early part of the 20th century did much to move psychology towards being as like a real science as it can. He was influenced by the work of Pavlov in the USSR.

ZPD or **zone of proximal development**: is each individual's range of physical/cognitive potential as illustrated by Vygotsky. We all have similar potential for different things - but not all in equal measure. ZPD is influenced by genetics, but if genetic potential is not encouraged and nurtured by *scaffolders*, an individual's potential in a particular area may never be realised. The richness of the child's social world is important for Vygotsky to the development and fulfilment of every child's zones of proximal development

STUDENT ACTIVITIES FOR COGNITIVE DEVELOPMENT

Individually or in groups, answer the following questions:

1. What do you think the study of Cognitive psychology is all about?

2. Identify by ticking in the boxes below what activities are associated with the study of cognitive development:

thinking and problem solving	☐
motivation	☐
ageing	☐
perception	☐
language	☐
attitudes	☐
prejudice	☐
attention	☐
biology	☐
memory	☐
play	☐
imprinting	☐
the Oedipus complex	☐

3. Fill in the blank spaces from the word box below

*genetic inheritance; cognitive social learning theory: social: people: interact: stages of development: actively learn: Behaviourism: Piaget's theory of cognitive development: age-stages: individual differences: biological: social world: to deal with, and learn from, its social world: sequences: thinking; problem-solving; imagination creativity; language etc**:** environment*

'Cognitive development' in developmental psychology has been heavily influenced by _____. He sees cognitive development mainly in terms of 'intelligence' and intellectual _____. These intellectual _____ of cognitive development are common to all children and all children have to go through them. Some however may go through a stage quicker/slower than others. This shows that there are _____in childrens cognitive abilities and development. Central to Piagetian thought is the role _____maturation plays in moving all children from one level of intellectual development to another. The influence of the child's _____regards cognitive development was only briefly considered by Piaget when he looked at the influence play has on the developing child. Play reflects the child's ability _____. Play, like cognitive development develops in _____reflecting the young child's awareness of its social world. Play is influenced by what children see others around them doing and is particularly important to the development of physical abilities, cognitive skills (_____.), social behaviour and related emotional development such as personality.

While biological maturation is important - the influence of the _____on a child's cognitive development began to see developmental psychology consider the contribution more environmentally orientated theories had to offer. _____ suggests that we learn via classical and operant conditioning and that, cognitively, we are the sum total of stimulus-response units of learnt behaviours. This was ultimately felt to be a bit over-simplistic, especially as most of the research into conditioning (learning) had taken place in a laboratory using animals such as rats, cats and pigeons. Human beings, it was felt, are more than this. Thus our _____environment as it affects, for example, social and moral development appears to have a strong influence on cognitive development. How we think about our learning experiences coming to us from our world, or, _____has to also be considered nowadays. The influence of biological maturation and _____ plus our environment and the significant_____in it should all nowadays be taken into consideration by developmental psychology in attempting to understand cognitive development. Cognitive development is now understood to be influenced by our biological maturation and genetic inheritance as we _____with, and_____from, experiences in our environment.

4. Wordsearch: Lifespan Development Gigantic Wordsearch

Identify and put a line through the corresponding word in the Wordsearch overleaf the word(s) which best fit each description below:

A more advanced form of organising our world.

Canadian psychologist who advocated social learning theory.

Evident in children's play - especially during Piaget's pre-operational stage. It is where children give a living personality to teddies, dolls, toy soldiers etc. It gives us a clue as to how young children perceive their world.

Term used by Vygotsky to describe children as active learners.

A simple form of organising information about our world.

Sometimes called the *first force* in psychology.

An early behaviourist whose theory of operant conditioning has been hugely influential in understanding how we learn behaviours from early infancy onwards.

Discovered by Ivan Pavlov it is where we as organisms learn that one event (a stimulus) will predict another stimulus or event.

Behaviourist term for learning.

A stimulus you teach a participant to respond to in some way or other.

The study of this includes perception, attention, language, memory and thinking (or problem solving).

Piaget's third stage of cognitive, or intellectual, development between the ages of seven to eleven. The stage is identified in the developing child's ability to think more abstractly about their world. They solve problems using abstract reasoning such as reversibility and simple hypothesising.

A child's ability to understand physical aspects of their world such as number, volume, length, weight and mass.

Where a young child can show they can see the world from other people's point of view. A Piagetian term referring to a child during accommodation where they are changing/forming new schema in order to deal better with their world.

A child's inability to see the world from another person's point of view.

Jerome Bruner's notion as to how children first 'represent' or think about their world.

A Piagetian term where a child is said to be assimilating with its world. It is dealing with its environment in terms of *existing* knowledge structures or schema.

The last stage in Piaget's theory of cognitive development from eleven to thirteen.

The study of the growth of thought and knowledge in relation to evolutionary biology.

Watson, Skinner Pavlov etc.

A phrase used in psychology which gives names to things which do not exist in reality (and consequentially are very hard to measure/observe) e.g. perception.

Jerome Bruner's idea that children as they get older (2+) begin to think and deal with their world using mental *images*.

The phrase the Canadian psychologist Alfred Bandura proposed in his social learning theory where children model their behaviour on others that they see.

Soviet Nobel Prize winning physiologist who's work with dogs saw him putting forward a leaning theory regards classical conditioning.

Swiss psychologist (1896-1980) who's main contribution to psychology is that cognitive development (notably intelligence) occurs in stages for children. Children cannot do certain cognitive tasks until they are biologically ready.

A psychologist who says children's intellectual development depends on *how* their minds use the information it receives. He identified *inactive, iconic* and *semantic* types of thinking used by the growing child to represent their world.

American founding father of the behaviourist school in psychology**,** who, in the early part of the 20th century did much to move psychology towards being as like a real science as it can. He was influenced by the work of Pavlov in the USSR.

Major research method used in psychology, especially by behaviourists and their modern day equivalent.

A cognitive process identified as particular to human beings.

Soviet psychologist (1896-1934), who emphasises the importance of social interaction with others as the key to cognitive development and fulfilment of whatever zone of proximal development an individual might have.

The images we use in our minds to represent or think about our world.

Term used by Bandura to identify the person whom a child is imitating their behaviour upon.

The process of imitation.

Ways of thinking about our world.

Piaget's observation that a very young child appears to deal with their world in the 'here and now'. If they cannot directly see or experience something, it does not exist.

Bandura's term for the process of learning certain behaviours by a child as it observes and imitates the behaviours of others.

An innate or inborn ability to organise information about our world identified by Jean Piaget.

Piaget's second stage of cognitive development in children from two to seven.

Behaviourist term attributed to BF Skinner that means the use of reward to encourage particular behaviours.

Piaget believes we develop this at the concrete operational stage of cognitive development. It is our mental ability to move concepts around in our minds in order to solve problems.

Type of play that according to Piaget develops during the concrete-operational stage of cognitive development. It is where the developing child begins to appreciate that in order to work, play and live together rules are necessary to govern people's behaviour.

Physical, cognitive, social and emotional changes across the human lifecycle attributed to the Soviet psychologist Lev Vygotsky. He believed that cognitive ability depended very much on what we learn from our social world. This describes the support we get as children, teenagers and adults to help us develop whatever potentials we have.

An organised structure or bundle of knowledge we have about aspects of our world which can change with age and experience. Piaget thinks the ability to organise our world on their basis is innate.

A term used by Jerome Bruner to identify how infants and children develop ways to think about their world.

Piaget's first stage of cognitive development from birth to age two.

Attributed to the Canadian psychologist Alfred Bandura, this theory believes that children learn social behaviours by modelling themselves on others using imitation and observation. What they see adults do is especially influential on children.

Physical; cognitive social and emotional changes happen is *stages* during our life and what changes happen continuously in them.

An object, event, situation etc. which we come across in our environment and to which we normally respond in some way.

Sylva *et al* (1980) report that play behaviours develop in a sequence of stages. *This* play is imaginary, make-believe or pretend play that becomes more and more evident in children from four onwards. It is play which involves children using objects to represent other things e.g. a brush handle being used to ride around on because it represents a horse: a collection of books end-up on the floor which become a cave: dolls, teddies etc which become real people.

Behaviourist term associated with Pavlov. In the absence of reinforcement, the desired response to a conditional stimulus will disappear. This is known as extinction. Occasionally however, after a period of rest, the organism may once again respond to a conditional stimulus when it is presented.

Each individual's range of physical/cognitive potential as illustrated by Vygotsky.

Cognitive Development Gigantic Wordsearch

accommodationconcrete-operationalstage
geneticepistemologyscaffoldingAlfredBandura
animismassimilationbehaviouristsgenetic
epistemologyclassicalconditioningconditioning
cognitivedevelopmentgeneticepistemology
apprenticesconservationmodesofrepresentation
decentredisequilibriumLevVygotskymodel
egocentricenactivemodeequilibriumformal
operationalstagestagesspontaneousrecovery
zoneofproximaldevelopmentconditionalstimulus
imitationJeanPiagetJeromeBrunerlaboratory
IvanPetrovitchPavlovexperimentlanguage
hypotheticalconstructsiconicmode
mentalrepresentationBFSkinnermodelling
objectpermanenceobservationallearning
organisationrule-boundplayreversibility
pre-operationalstagepositivereinforcement
sequenceofdevelopmentschemasemanticmodes
JohnBroadus Watsonsensori-motor stage
sociallearningtheorystimulisymbolic play

5. *Quick Quiz*

   a) What can be described as *the study of how our brain takes in information from the outside world and what we do with this as a result?*

   b) What is the study of the *development of thought and knowledge* called?

   c) What is a baby's ability to *order schema* called?

   d) What *two mental processes* are involved in our *adaptation* to our environment?

   e) Name Piaget's four stages of cognitive development.

   f) What is *object permanence*?

   g) What is *conservation*?

   h) What 4 types of play does Piaget associate with each of the above four stages of cognitive development?

   i) What is *animism*?

   j) What does animism encourage?

   k) Name two other psychologists associated with the developmental psychology of play.

   l) What two ways do behaviourists like Pavlov; Skinner and Watson say we learn?

   m) What was the aim of Watson and Raynor's Little Albert experiment?

   n) How does Alfred Bandura say we also learn?

   o) Of what importance is a 'model' to Bandura's theory?

   p) What is '*scaffolding*'?

   q) Name four types of people who might be involved in scaffolding.

   r) What do the initials ZPD mean?

   s) Who is the psychologist associated with inactive, iconic and semantic modes of thinking?

   t) What has the biggest influence on cognitive development: *biological maturation, genetic inheritance, our self or our environment*. Give a reason for your answer?

6. Answer the following questions:

   a) Describe the concept of *Cognitive development*. Your answer should:
      - identify the processes involved in '*cognition*'
      - that *one in particular* has special attention paid to it within cognitive development
      - that this cognitive ability develops at particular ages and in identified stages and that play and social interaction should not be forgotten as also important to cognitive development

   b) Describe the *sensori-motor stage* of cognitive development.

   c) Describe the *pre-operational stage* of cognitive development.

   d) Describe the *concrete operational stage* of cognitive development.

   e) Identify, describe and explain the scenario where you observe that *a two-year-old child is drinking pretend tea from a doll's cup*.

CONCEPT 3: ADOLESCENCE AND ADULTHOOD

Informaton: Introduction

For the purposes of the Intermediate 1/2 developmental psychology optional key concept *Adolescence and Adulthood* SQA particularly emphasise:

- personality change and social development in adolescence
- personality change and social development in adulthood
- life changes and development.

To recap: developmental psychology concerns itself with physical, cognitive, emotional, social change and development. As students of developmental psychology, we now realise that these changes happen in whole or in part throughout the human lifespan. These physical, cognitive, emotional and social changes experienced by us are continuous and progressive - though not in equal proportion to one another. At *particular* age-stages in life a change in one area can be so intense that it has equally dramatic effects on other aspects of psychological development. The age-stage of adolescence, and to a slightly lesser extent adulthood, are ideal examples of this.

At the end of childhood we all go through astonishing physical change triggered by our biological timeclock contained within our DNA. To ensure the survival of the species once again, another **evolutionary algorithm** kicks in. These biological and physiological changes we call **puberty**. This begins on average for girls around age 10 with the onset of menstruation, and for boys on average around age twelve with the growth of pubic hair. Rapid physical development follows for both sexes, and has a knock-on effect on cognitive, emotional and social development in the teenage years. We also end up trying to discover and confirm our personal identity. This search, revision and confirmation of identity can be greatly influenced by those we find around us.

In this optional concept the physical, cognitive, emotional and social aspects of developmental psychology are all very much interlinked. *Adolescence and Adulthood* will therefore examine physical changes and related psychological issues like personality, self and social relationships.

Adolescence: Physical, cognitive, emotional and social development

Physical development

Adolescence is a period of **maturation** between childhood and adulthood where we begin to function independently of our parents. The period of adolescence is taken to be from age 12-18. These are the teenage years in the main. All peoples, the world over experience adolescence, if only in the physical sense. Adolescence is a particularly important period in our life from the point of view of physical, cognitive, social and emotional development.

The formal recognition of movement from childhood to adulthood has been, and is, often celebrated by the culture within which we live. Historically the onset of puberty for boys for example, saw them undergoing a formal rite of passage after they had lived independently from their tribe. It was a rite that proved manhood. Today Jewish boys will undergo their *bar mitzvah* at age 13. A bar mitzvah is the Jewish faith's recognition and celebration that a young boy has reached the age of legal maturity and is therefore obliged to observe all the commandments. They are formally recognised, in the religious sense, as fully mature adults.

We often call adolescence the 'teenage years'. The social concept of the *teenager* is relatively recent. Full employment after the war, the ending of rationing, the raising of the school leaving age and the introduction of comprehensive schools in the 1970s gave much to adolescents being identified as a distinct social group apart from children and adults. This was helped along greatly by the innovation of 'pop' music and distinct teenage fashion in the 1960s: a market that continues to be exploited today.

Physiological development

As suggested earlier, adolescence is marked by physical change. Physical change is of two kinds:

- **sexual maturation - puberty**
- **physical maturation - the adolescent growth spurt.**

Physical maturation happens due to a sequence of hormonal changes in our body initiated by our **hypothalamus** (small structure near the lower surface of the brain which is important for our emotions and '**drive states**' like hunger, thirst and sexual arousal) and the connected **pituitary gland**. Increased secretions of hormones (mainly **androgen** in boys and **oestrogen** in girls) trigger sexual and physical changes in our body. Within two years we find that we have sexually matured and are nearly at the peak of our physical growth. This period of bodily change and physical growth we call the **adolescent growth spurt**.

The development of secondary sex characteristics (based on Tanner, 1978; Tanner and Whitehouse, 1976)	
	Girls
Ages **10-11**	Breast bud
	Uterine and vaginal changes begin
	Pubic hair appears
Ages **12-13**	Underarm hair appears
	Breast enlargement continues
	First menstruation
Age **14-15**	Mature pubic hair
	Mature breast
	Boys
Ages **11-12**	Testes enlarging
	Pubic hair appearing
	Penis enlarging
Ages **13-14**	First ejaculation
	Underarm and facial hair appearing
	Voice deepening
Ages **14-15**	Penis adult-size
	Mature pubic hair
	Testes adult-size

Greatest height and weight gain is experienced by boys on average at age 14, while for girls height and weight gain is experienced on average around age 12. Puberty and the adolescent growth spurt thus happens two years earlier in girls than in boys. Boys, when they *do* experience puberty and the growth spurt quickly catch up, and overtake parallel physical development in girls. By age 18, most males will be easily identifiable from their secondary sexual characteristics, as will most females. Males will be in general heavier and taller than their female counterparts.

Sexual development

The physical bodily changes that are associated with puberty naturally lead to the development of our sex drive. Sexual reproduction is a biological imperative. We are genetically programmed to seek a mate with which to produce offspring. Adolescence sees young people develop an interest in sex. Teenagers naturally experiment with their recently found sexuality during adolescence. Our biologically determined sex drive state is heavily controlled and influenced by our culture and social world.

A great deal of social taboo is associated with sexual matters. Up until the 1960s, mainly working class, Scottish teenage girls who found themselves pregnant could find themselves permanently incarcerated in a mental hospital for being morally corrupt. It is fair to say that despite social disapproval, sexual activity has increased among teenagers. It is known that a substantial percentage of pre-16 teenagers in Scotland engage in sexual intercourse despite the fact that this is illegal before age 16. Whether or not they are mentally and emotionally ready to face the consequences of their actions is another matter.

In psychology's early days an attempt was made by the highly influential Sigmund **Freud** (1901) to link sexual development and personality. This became known as Freud's theory of psychosexual development. This appears in tabular form overleaf. Freud's theory on psychosexual development has been found to lack scientific evidence. It is difficult as we approach the millennium to give much credence to potty training making someone generous or greedy! Freud was also wrong when he concluded that our personalities are fixed by the end of childhood. This as we shall see is not the case. Personality can be altered and changed: for good or bad: at any time during our lives. We must thank Freud however for being brave enough to raise sexual matters to the level of academic debate at a time of great sexual oppression in Europe and beyond. Freud began a trend regards more openness about 'sex' - which from a psychological and social point of view is very healthy. The sympathy and empathy we now show as a society towards victims of child sex abuse and rape is indicative of Freud's work

Freud's psychosexual stages of personality

STAGE	AGE	CHARACTERISTICS
Oral	0-1	During infancy the focus of pleasurable stimulation comes via the baby's mouth. It is via its mouth the baby gets nourishment and nipple contact with mother. Over or under stimulation can affect the adult personality leading to an oral fixation in later life which might be evident in behaviours such as nail biting; smoking; excessive eating; drinking, etc. How many teenagers bite their nails when stressed or worried about something? How many older people reach for a cigarette?
Anal	2-3	Toddlerhood and early childhood sees the focus of pleasurable activity switch from the mouth to the anus. We get pleasure excreting and being in control of when we do so. Toilet training comes along however, and according to Freud, how strict or liberal our primary caregiver is when toilet training us can affect aspects of our personality and associated behaviour in adult life. How children between 2-3 resolve the conflict felt between previous excretion at will and society's rules concerning when, how and in what circumstance we go to the toilet can result in an anal fixation. Examples of anal fixations in later life might be those of us who are excessively neat and tidy; or indeed excessively disorganised and untidy; it might also be apparent in people who are excessively generous or man.
Phallic	3-6	Associated with the dawning realisation that they are a boy or girl, focus of pleasurable activity during the phallic stage is the genitals. Self-stimulation is found very satisfying by the young child. This gives rise to sexual curiosity about other children of the opposite sex. To confirm our sexual identity we go through a process of rejection of our same-sex parent and attachment to our opposite-sex parent or caregiver. Loving one and not the other is uncomfortable for us. We resolve this by showing our love for the same-sex parent by adopting their gender roles and behaviours. Problems encountered during the phallic stage can lead to confusion of sexual identity and sexual difficulties in later life. Constant selfish behaviour, especially in relationships may be an outward sign of psychosexual problems encountered at the phallic stage from 3-6.
Latent	6-12	The primary school years sees a fall in interest in psychosexual associations with any erogenous zone. Children during this time appear to be a lot more concerned with social matters such as school, friendships, peer group play, relationships and activities such as Cubs, Brownies, Guides, dancing, etc.
Genital	11/12+	The onset of puberty in both sexes sees a renewed interest in the genitals of themselves and others. Experimentation is a feature of these years. We feel a need to seek and experience a loving, increasingly sexual relationship with someone else. We are maturing towards establishing a long-lasting loving relationship with a partner in adulthood. There is no associated fixation with this last stage of psychosexual development.

What do you think?

As is perfectly natural for human beings, some boys and some girls start puberty and the adolescent growth spurt earlier or later than the rest of their classmates.

1. *What does the child who experiences the early arrival of puberty fear most? What can we, as adults do to help? What should we be encouraging the child's friends and classmates to do? Are they doing what we ask of them?*

2. *What does the child who experiences the late arrival of puberty fear most? What can we, as adults, do to help? What should we be encouraging the child's friends and classmates to do? Are they doing what we ask them?*

3. *How are adolescents' thinking and behaviour influenced by the onset of puberty?*

Cognitive development

In developmental psychology 'cognitive development', because of the influence of Jean Piaget, has come to mean 'intelligence'. In the *wider* psychological sense, cognitive development is more than this. Cognitive development is perception, attention, language, memory *and* thinking. This aside, Piaget says that by adolescence teenagers will have come through a series of cognitive developments in childhood (sensori-motor, pre-operational, concrete operational and formal operational stages). By age 12/13 he believes children will have mastered the formal operational stage of cognitive development. They will be able to solve complex problems by using logic, deduction and hypotheses. From Piaget's point of view, adolescence does not see much cognitive development or change. There is evidence to suggest that successfully mastering formal operational thought is not as universal as Piaget thought. Many adults have difficulty with numbers and scientifically working their way through a problem.

Cognitive development is more than just thinking or intelligence. Cognitive development involves the continued development of perception. Perception is our ability to experience, interpret and act upon sensations coming to us from our outside world via our senses. What we perceive of an object, event person etc, is very much based on just how meaningful it is to us and our past experience of it.

Our perception of the world and of ourself is very much influenced by what others tell us. In childhood, *meanings* of objects, events, persons and issues are given to us by our parents and teachers. This we accept quite happily. A six year old will often justify why they are acting in a particular way because '*Mummy says...*' By our adolescence however we begin to question others' interpretation of our world much more. We begin to perceive, or make sense of things, more from our own point of view. How we think about and value ourselves, called **self-perception**, is often influenced by what we think *others* think of us. This area is further explored when we consider emotional development during adolescence.

Emotional development

Personality and 'Finding Ourself'

Personality

The famous American psychologist G. Stanley Hall in 1904 said that adolescence was a time of 'storm and stress' (***Sturm und Drang***). Adolescence mirrored the relationship, struggle and progress between mankind and nature since the beginnings of time. Hall believed adolescence to be a particularly stressful time for individuals in comparison to other life-stages or ages. This he thought could have a long-lasting effect on personality. Nowadays it is felt adolescence is no more stressful than at any other time in our life (Bandura and Walters 1959), though it would be true to say that from a personality point of view, adolescents appear to react more intensely to situations than their adult counterparts. Extreme reactions to social situations seem to diminish over time. Rutter *et al* (1976) found only a small difference between the number of 10 year olds (10.9%), 14 year olds (12.5%) and adults (11.9%) diagnosed with a mental disorder. Many of the adults had been identified as psychologically abnormal in early childhood. While some of the adults *did* begin to show signs of mental disorder and atypical (abnormal) behaviour in adolescence, Rutter *et al* concluded this was as a result of stressful situations found in the home.

Erik Erikson's Psychosocial Theory of Personality and Adolescence

Historical and scientific developments in psychology have seen much criticism of Freud's over-emphases on matters sexual. He did in the instance of personality, give some useful insight into the inter-relationship between personal experiences during our life and the development of personality. This was extended by the late **Erik Erikson** (1902-1994), a **neo-Freudian**, who proposed that it is our **social world** at particular age-stages of our life - and not our instinctual sexual urges - which affects personality development. He disagreed with Freud (as did Alfred Adler) that personality is shaped and fixed by the end of childhood. For Erikson personality does not just depend on childhood alone but is shaped, changed and developed throughout the whole of our lives. His theory has underlying **epigenic principles** to it i.e. psychological (or in Erikson's case *psychosocial*) development occurs in a sequence of stages related to genetically predetermined biological period in our life. The connection is especially clear when we look at puberty and personality during adolescence.

As was also seen in our compulsory developmental psychology topic, *Lifespan Development*, Erikson put forward what he felt to be a universally applicable **psychosocial theory of personality development** which stresses the importance of our individual need for social approval and belonging, and that if this is frustrated, hindered or impeded we can end up with a jaundiced personality as a consequence of making negative decisions at each/some/all of his **eight *age stages*** in life. Dividing the human lifecycle into eight stages he believes that at each stage we decide and make choices about our life based on what we experience from our environment.

We make positive or negative **psychosocial decisions** which affect our personality.

Erikson terms these eight stages **psychosocial crises**. How we deal with each psychosocial stage, or crisis, shapes our personality in either a positive or negative way. It should be noted that Erikson did not see these negative or positive decisions, or outcomes, in an 'either-or' sense. Most personalities exhibit aspects of positive and negative psychosocial outcomes connected with a particular stage or stages. The healthy personality would see more positive rather than negative outcomes (***adaptive*** *rather than* ***maladaptive psychosocial decisions***) being made. For Erikson, a healthy adolescent personality is one that exhibits **identity integration** by the end of the stage at age 19. They have experienced more positive than negative outcomes in their search for identity. They have made more adaptive psychosocial decisions during the *identity v role confusion/diffusion* psychosocial '*crisis*' in their life.

Overview: Erik Erikson's Theory Of Psychosocial Crisis: An Age- Stage Approach to Personality

What Erikson's theory suggests is that in a general and specific sense, an individual's personality comes about in a developmental and discontinuous fashion over the whole of the human lifespan. Central to personality is identity - or knowing who we are. Adolescence is a particular time of our life where we begin to search for our own identity. For Erikson, adolescence is the developmental period in our life where we set about finding ourself. That the search for identity can take people the whole of their developmental lifespan, with many never truly discovering personal identity.

Revision: What for Erikson comes before adolescence

Identity v. role confusion?

Trust v mistrust: age 0-1
On the basis of a baby's experiences in early life, an infant will begin to form an impression of its world. If it has enjoyed a stable, nourishing, loving and caring early life, it should come to view the world in a secure and trusting way. If, on the other hand, its early life has not been so stable, nourishing and loving it will see itself as insecure in an uncaring, untrusting and harsh world.

Autonomy v shame or doubt: age 2-3
Erikson's Freudian influences show themselves at this age-stage in the development of personality. Erikson says our 'toilet training' years lead us to begin to believe ourselves either to be in control and physically competent or doubtful about our developing independence, abilities and skills. How others react to our efforts to become more autonomous, affects how we view ourself. Doubting your ability, especially on the basis of what those we love tell us, gives rise to a lack of confidence in what you do and in your dealings with others.

Initiative v guilt: age 3-5
A time of increasing motor dependence, age 3-5 is also a period of intense curiosity, questioning and enquiry for the young child. How caregivers develop or discourage this, can, Erikson believes affect the developing personality and related social skills. Having our curiosity encouraged, satisfied and extended develops initiative. Being made to feel a burden or a nuisance leads alternatively to feelings of insecurity and guilt about how to deal with, and solve, all the challenges life throws at us.

Industry v inferiority: age 6-12
The primary school years see children exposed to an environment where cognitive, social and emotional growth is demanded and encouraged. Their experiences here from teachers, parents, **siblings** (brothers and sisters) and increasingly, their peer group will result in individuals sensing that they are competent, productive and valued or incompetent, underproductive and undervalued. Where we get our feelings of inferiority is most interesting here.

- **Identity v role confusion/diffusion stage: age 12-19**

During this time we are pulled between beginning to value and recognise our own unique identity, and previous experience of knowing that to be seen as different from everyone else *can* pose problems. These years see teenagers begin to deliberately associate with others they see as similar to themselves. As if having to confirm who they think they individually are, a group of teenagers will very often dress the same way, like the same type of music and enjoy the same activities and social scene. Movement between different peer groups is normal as we try and find friendship with those who better share our own individual opinions, preferences, outlook on life etc. Friends who are similar to ourselves are used by us to confirm who we are. This is an aspect of what Erikson would see as the **moratorium** or period of avoiding commitment to a particular role or identity in life as we actively seek out and experiment into who it is we think we are (increasingly this moratorium on identity is

carried over into adulthood).

Successful resolution of Identity v Role Confusion/Diffusion would be someone in their early 20s who is happy with their own unique self and their role in life. They have successfully achieved the positive or *adaptive* outcome of **identity**. If they thought about it long enough, they would also realise that their unique personality and life also means something to others. They feel valued in that they are valued by others as such. If you, on the other hand, have been unable to discover your true identity during the teenage years, you can come through this crisis with a confused (unsure as to who you are) or diffused (all over the place) identity. Your experience during your teenage years in your search for personal identity has resulted in you developing a negative outcome or maladaptive personality. For Erikson you are suffering from **role confusion** or **diffusion**. As a result you undervalue your own unique personality and probably will have difficulty sustaining long-lasting friendships with others.

Role confusion, for Erikson, can be seen in people who drift aimlessly in life. In severe cases role confusion can lead to juvenile delinquent behaviours. These behaviours come about because the young person does not really know who they are and as a result adopt extreme behaviours that set them apart from others. They have a **negative identity**. For this individual their negative identity is *better* than the loneliness and isolation which they may experience from not achieving a more functional and constructive role in life.

Other negative outcomes and resulting role confusion at this psychosocial stage can be seen in behaviours relating to:

1. **Intimacy**: where a person might fear losing their own fragile identity as a result of trying to establish a relationship with another. They may form only stereotypical relationships with another or avoid an intimate relationship altogether that leads to isolation.
2. **Time perspective:** where an adolescent, fearful of becoming an adult, can appear to lose the ability to plan or retain a sense of time.
3. **Industry:** an aspect of role confusion where adolescents can lose commitment to the everyday humdrum necessities of life. This can be seen in some adolescents lasting inability to concentrate on work or study or where an adolescent throws themselves into a single issue or task to the exclusion of all else.

Erikson's Psychosocial Theory of Personality: Adolescence

Identity v role confusion/diffusion (continued)

Puberty triggers our psychological journey for **ego identity** (a firm idea as to who you are and what you stand for). What *does* the concept of **identity** means in psychology?

Identity: Finding oneself. Who am I*?*

Very evident bodily changes during adolescence make us each more self-aware of who we are and what we are becoming. We also become aware that others are aware of our changing physique! This in turn makes us even *more* self-conscious or aware of ourself physically, cognitively and socially. Unsurprisingly perhaps, increased self-awareness can temporarily or permanently influence our emotional development, or how we each feel in and with others and ourself. **Self awareness** includes our ability to recognise what emotional state we are in (happy, sad, worried etc), our increasing ability to recognise the emotional state *others* are in (a very useful survival mechanism now and in the past) and our personal characteristics (our unique personality, abilities and degree of motivation to do things).

How we perceive ourself, physically, mentally and socially can lead to low self-esteem and a damaged personality. To put this very simply, a 13 year old girl can be very self-conscious about her developing physique. She worries about how she looks, and how she looks in relation to others. How others react to her physical changes can result in the girl feeling that she is abnormal in a physical sense. This can lead to her thinking less of herself than she might, and, exacerbate natural teenage awkwardness when she finds herself in social situations.

The psychological notion of **self**, and related concepts, is thus much more than just *physical* self. The self in psychology is often taken to be our individual **psyche** or soul. The **humanistic approach** in psychology concerns itself very much with the self. For humanistic psychologists, the ***self*** is our own awareness of that part of us, which makes us collectively and individually human. Our individual self is literally our 'well-being'; our essence or how good, bad or indifferent we feel about ourself and ourself in relation to others. Our self, of powerful feelings, thoughts and behaviours related to our well being, is said to come from all the experiences we have and is affected by all these *phenomena* we come across in life.

In psychology our self is said to be influenced by our **phenomenological field** - the experiences we have in our environment. Our personal idea of self is therefore effected by our genetics (nature); our external world (our environment) and our own interpretation of both as they affect us during our life.

As has been said dramatic physical change during adolescence almost inevitably leads to heightened self-awareness for the individual in a physical cognitive and social sense. Self-awareness is affected by self-esteem. **Self-esteem**, the value we place in ourself, comes about as a result of having mastered a task or skill and/or getting genuine respect for who you are from others.

Respect comes from others recognising something of value *you* give to them. Respect is earned, it is not a commodity you can bully out of others. Often we experience difficulties in mastering things in adolescence. Not getting high marks in exams is an example of this! The inability to master a task or skill or a failure to win the respect of others can lead to feelings of low self-esteem in adolescence. With sympathy, empathy and guidance from parents, teachers, friends etc. we can re-establish our self-esteem. Very often however this is absent. We can go through adolescence and beyond with the psychological burden of self-doubt as a result of low self-esteem. Ironically this is as a consequence of *others* interpretation of you. You are living *other peoples' perception* of you! The stress and anxiety associated with not knowing who you really are can cause difficulties for some people. The psychological evidence for the effects of stress in adolescence, in comparison to any other stage in our life, is contradictory and inconclusive as is whether or not the stresses and strains of adolescence *alone* cause particular psychological difficulties for some during and after this time as they search for, revise and confirm their identity.

What can be said is that by the end of adolescence it is hoped we have discovered and established our own **self-concept**: our self-concept is the characteristics an individual perceives as unique and peculiar to themselves.

What do you think?

Adolescence is a period of maturation from childhood to adulthood.
When does society say you become an 'adult'

a) If you commit a criminal offence?

b) If you need medical treatment?

c) If you want to vote?

d) If you want to stand as a Member of Parliament?

e) If you want to get married?

f) If you want to drink in a pub?

g) If you want to join the army?

h) If you want to drive a car?

i) If you want to drive a moped?

j) If you want to drive an HGV?

Is It Any Wonder Teenagers are Confused As To Who They Are!

Erikson's Psychosocial Theory of Personality: The Final 3 Age-Stages

This will be revisited in more detail when we discuss personality in adulthood.

Intimacy v isolation 20s-30s

This is the age-stage where we search for a partner with whom we think we want to spend the rest of our life. Biologically, socially and emotionally there is a great drive for intimacy with another during this time. Everyone else around us, it seems is doing the same thing. Everyone else seems to have found love. How successful, or otherwise, we are during this psychosocial stage sees us either form an intimate, loving relationship with another or doubt our ability to do so and facing a lifetime of isolation and loneliness. The downside of this stage can be extremely destructive for individuals.

Generativity v stagnation 30s-50s

Between these years, childcare responsibilities for adults diminish. We begin to examine how productive and creative our work and relationships are. Very often we use this time to widen our education and also give something of ourselves back to the work place; trade union; club; community group; religious organisation etc. to which we belong. We benefit others and simultaneously feel we have 'made a contribution' in our own unique way. If, however you find that your life has become unproductive, routine and stagnant, we feel psychosocially and psychologically unfulfilled. There is something missing from our lifelong quest to discover what it means to be human. We lose direction and purpose in life.

Integrity v despair 60s+

This sees us approach the inevitable end of our life. During this stage we reflect on what our past life has been like and what sort of difference we have made as individuals. We each weigh up our life 'balance-sheet'. Was it good, bad or indifferent? If, on balance, we feel we have had a good and worthwhile life we go to our deaths feeling good and at peace, if it has been not so good we may feel despair and a sense of never having been on earth in the first place.

Points to note:

Erikson, on the basis of cross-cultural comparison and working as a practitioner in the USA, *believed* that we *develop our personalities as a result of particular social experiences at eight stages in our lives*. His theory is said to be *universal* in that it can be applied to all cultures. If we had a negative experience during a particular psychosocial stage this can affect the adult personality e.g. if we conclude at the *trust v mistrust* stage that our world and the people in it should not be trusted, this can affect the establishment of relationships with others then and in the future. He also says that we can 'revisit' past stages in our life, and if we think we have made a negative decision that has affected our personality and gives us discomfort we can realise and rectify this. This is one reason why older people often try to mend bridges and make amends with others they have had a serious fall out with at some earlier point in their life. Faced with *integrity v despair* they have a desire to die more at peace and less in despair with themselves.

His psychosocial theory of personality has great worth at all points in the human lifecycle to try and understand why we are as we are and what we might become. It is a developmental and discontinuous stage-related theory of personality which allows us an insight into the outcome of our physical, cognitive and social experiences coming together to affect an important aspect of human emotion - personality.

There is conflicting evidence concerning the worldwide applicability, or *universality*, of the theory and whether it is relevant today; mainly due to the changing and diverse social world we live in. As our social world becomes more complex this makes universal links between the social and emotional aspects of general personality development more difficult. The boundaries of 'adolescence' have been extended over the years. The European Union, for example, recognises a young person as someone between 16-25. The fact that more and more people over the age of 19 continue to 'find themselves' by travelling and put off establishing a firm loving relationship with another well into their 20s and 30s, the growing numbers of post-18s entering full-time further and higher education, the growth, acceptance and recognition of alternative lifestyles and cultural and economic differences all go towards questioning the accuracy of Erikson's theory that personality develops in distinct universal stages with adolescence being a time of particular importance to personality development.

Research into Erikson's theory has concentrated on the measurement of self-esteem as an indicator of psychosocial crisis during adolescence. Simmons and Rosenberg (1979) found that low self-esteem is more common during adolescence than childhood or adulthood. They further discovered that low self-esteem was experienced more by girls than boys. Offer *et al* (1988) and Coleman and Hendry (1990) however conclude that there is little scientific evidence to prove a universal or particular increase in doubting self-image (who you are) in adolescence *alone*; that any intense questioning of identity, if it happens, will be in the early teenage years and finally that any long-term feelings and effects of low self-esteem and a negative self-image only affect a very small number of adolescents.

Social development

While there is little evidence to point towards adolescence *alone* shaping and permanently fixing personality, it would be true to say that adolescence is the time of our individual search for identity. Our environment in the form of our social world is important to us as it helps us confirm who we think we are. The discovery of who we are is very much related to our social world and the experiences we have within it. Social influences on **identity formation**, the formation of an individual's idea and perception of ***self***, include:

- **parents**
- **teachers**
- **peer groups**
- **the media.**

Parents

By adolescence the influence parents have directly on their offspring's identity and personality begins to diminish. It has been found that the **parental child-rearing style** (*how we are brought up*) used in infancy and childhood *can* influence children's social, cognitive and emotional development. This is associated with what sociologists, social anthropologists and social psychologists would call the **socialisation** process; how and where we learn the rules, morals, **norms**, beliefs and values of the culture and sub-cultures we live in. The effects of parental child-rearing style on our ability to discover who we truly are and the related issue of personality is carried through into adolescence and beyond. Diana Baumrind (1967, 1991) in a series of interviews and non-participant observational studies at home and at school identified three child-rearing styles which in her opinion can have some effect upon personality. These child-rearing styles are:

- **permissive parenting**
- **authoritarian parenting**
- **authoritative parenting.**

Permissive parents are those parents who make few demands on their offspring and allow them to make up their own minds about things. Ultimately the child decides. There is little control by permissive parents of children. It is to be hoped that permissive parenting leads to the development of initiative, independence and self-reliance.

In comparison to children brought up in an authoritarian home, permissive parenting in general results in children showing self-confidence, self-reliance and independence. Often however permissive parenting is not deliberate but arises from adults who are indifferent to their children.

Authoritarian parents are those parents who do not consult their children about decisions which affect them. These are parents who would be seen as strict who will have very high standards and rules and who will tend to use punishment and sanctions as a means of control in the home. There is little room for discussion from the child or teenagers point of view with these *autocratic* parents**.** Children find decisions about them made for them. Baumrind (1971) established that these children are more withdrawn and shy, lack energy, are more dependent and socially tense when

compared to children brought up under a different style of parenting. This can result in these children growing up into adults who are unable to make decisions for themselves and also unable to seek guidance on decision making from others. They can feel a failure in that they constantly compare their efforts with the impossible standards of their parents. They see life in very black and white terms. Adorno *et al* (1950) in *The Authoritarian Personality* suggest that an authoritarian personality is very much influenced by having been exposed to an authoritarian upbringing.

Authoritative parents are those who consult with their children on decisions which affect them. The child may or may not '*get their own way*.' This is because authoritative parents have standards and rules that they want their child to respect. Authoritative style of child-rearing has been found to encourage independence and self-esteem in children and teenagers. It encourages mature behaviour, individuality, respect for all and the recognition and enforcement of rules via two-way communication between parent(s) and child. Shaffer (1985) reports that with authoritative parenting boys show higher than average cognitive and social skills, while girls show *very* high cognitive and social skills. Baumrind (1971, 1975) identified authoritative parenting style children and teenagers as more co-operative, friendly, successful, achievement orientated, independent and self-assertive than their peers brought up in an authoritarian or permissive home.

Genuine democratic consultation and controlled independence encouraged in a loving home where children know and respect the boundaries laid down by the adults around them seems to produce more mature and socially competent children than other parenting regimes.

Teachers

Teachers also play an important role in the socialisation process. This is especially true in the early years of primary school. They do much to encourage societies rules, morals, norms, beliefs and values. They encourage for example positive personal identity through association with a particular school. In our adult years we often get great pleasure from meeting a long-lost friend from school. The meeting helps confirm who we are and who we are not. By adolescence, teachers lose much direct influence in the establishment of identity and personality. There are however two interesting exceptions to this.

The first is **labelling**. This happens when teachers come across a child whose older brother or sister has been taught by them in the past. *Labelling* is a sociological phenomena where the teacher, consciously or unconsciously, because of the older brother or sisters behaviour 'labels' the new child's expected behaviour to be the same.

If the older brother or sister has been a 'high flyer' teachers can come to expect the younger one to academically perform in the same way. If the older brother or sister has burnt the school down they might come to expect the younger one to do likewise! Labelling is obviously unfair and its use can put a child under a great deal of pressure.

The second area of interest here is the influence **teaching (or leadership) styles** can have on cognitive, social and emotional development. Lewin, Lippett and White (1938) set up a non-participant observation. They found a group of 10 year old boys who went to an after school model-making club run by teachers. The club had three groups.

Group one was led by an ***authoritarian leader***; the ***group two*** was led by a ***democratic*** (authoritative) ***leader*** and ***group three*** was run by a ***laissez-faire*** (permissive) ***leader***.

The authoritarian leader told his boys exactly what to make and how to make it. He praised good work and condemned bad - both without explanation.

The democratic leader discussed what his boys might make and encouraged discussion among his group. He gave detailed praise for good work and constructive comments to encourage the not so good efforts. He was warm and friendly with his boys and joined in group activity.

The laissez-faire leader let his boys do what they liked, gave no direction and no praise or encouragement for any work done.

Lewin, Lippett and White's (1938) observational study showed that the boys in the authoritarian group worked hardest but when left on their own would stop working and quarrel. They were unnaturally respectful at all times towards their leader. The democratic group was a lot more cheerful and did not quarrel as much. They actively discussed their work in a constructive way with their leader. When they were left alone they continued working and if someone had a problem the group would all help in trying to solve it. The permissive group was laziest of all. They were disorganised and unmotivated. If a problem did arise they were seen to give up almost immediately. In contrast with the other two groups these boys were noisy and misbehaved in the extreme.

Social and cognitive skills can therefore be encouraged by the style of leadership our teachers adopt with us - democratic or authoritative leadership style seems most effective in comparison to authoritarian or laissez-faire styles of leadership in the classroom. In turn these social and cognitive abilities influence identity and personality.

It should be noted however that we have no way of knowing that the children in the above study were not taking previously learnt behaviours from authoritarian/ democratic or permissive homes into the classroom. They may have been behaving '*true to form*' or reacting to a *change* in style rather than the style itself.

The influence of teachers wanes in the adolescent years. We should all however be grateful towards all our teachers for giving us the opportunity to develop our cognitive skills. Many of us, when we reflect back on life in adulthood become aware that we should be *particularly* grateful to some teachers whom we were taught by who have influenced us in a particular direction. This direction effects identity in *what* we become. The influence teachers have, Vygotsky would call **scaffolding**.

One of thousands of similar stories, the Commonwealth Games badminton gold-medallist, Scot Dan Travers, may never have achieved this height if his badminton had not been recognised and encouraged at age nine by two of his primary teachers setting up a badminton court in the school hall and coaching and encouraging his childhood talent during his lunchbreak. Badminton was just not known in Tollcross, Glasgow in the mid-1960s.

Many teachers enter teaching because they have been particularly impressed with the job some teachers do and want themselves to emulate. Their teaching style will be an amalgam of 'best practice' they have themselves been impressed with when they were pupils or students. Their style will be more democratic, supportive and empathic rather than authoritarian or permissive. Many teachers spend a great deal of time and effort, given warmly and freely, on an individual basis with adolescents who are particularly vulnerable and this can also have a tremendous influence on that individual's ultimate cognitive, social and emotional development.

The peer group

Your peer group most definitely helps individual **identity formation**. The peer group, or group of immediate colleagues, becomes most important to the individual in adolescence. A peer group in adolescence will be a year group for example. The peer group will share the same values and standards as themselves. In an attempt to establish and confirm individual identity many adolescents of 14-16 form small cliques. This is known in social psychology as the **in-group**. Any other group is an **out-group**.

In-group members will often share the same styles of music, fashion social scene etc. and 'talk-up' their in-group while talking down out-groups. The peer group gives its members a forum within which to experiment, search for, revise and confirm developing personal identity and the movement from childlike to adultlike behaviours. Groups of youths we see in our villages; towns and cities, will, like teenagers who have come before them, be pushing at the boundaries of 'rules' laid down by parents, teachers and others in authority.

Deviant behaviours will sometimes be apparent e.g. smoking - especially nowadays by girls, under-age drinking, drugs, truancy, petty criminal activity, sexual exploration, snubbing adults in authority, academic demotivation, etc. Often these types of behaviours will happen out of sight of adults, only coming to light when they are reported to adults and/or are extreme or dangerous. Many adolescents sail very close to the legal wind but come through relatively unscathed entering adulthood with a raft of experiences which have gone some way to help them discover who they are and who they are not.

Some however find themselves on a slippery slope from which there is little chance of escape. The Irvine Welsh novel and subsequent film '*Trainspotting*' is an excellent example of this.

The period of adolescence may see individuals 'drift' from one in-group to another in their attempt to find others similar to themselves. The friends one identifies with at age 13 are often not the same group you identify with at age 18 and beyond. Our **social network** begins in adolescence and changes and develops throughout. It is a social

network that by adulthood reflects much of what the individual thinks their identity is. An eighteen year old university student will have a different and more sophisticated social network than their eighteen year old friend with whom they went through school: but has him/herself chosen to remain in their village or town working in the local supermarket. As they both enter adulthood proper they drift apart even more. They *no longer* share as much in common with each other as they once did. They now do little to confirm each other's current and future identity. This is because their differing social networks contain people more like themselves.

A related factor here is **social cognition**. Social cognition is nowadays central to social psychology and concerns the relationship between our thoughts, our social world and our behaviour. The social world we find ourself in will influence our thinking and thus our behaviour in it. Put simply, if we find ourself at a funeral our thoughts should focus on the deceased and his/her family. Behaviourally we would act appropriately by showing respect etc. towards all there. If the social world we live in is consistent, we form **schemata** (***thoughts and knowledge***) about ourselves, others and our/their roles within our social world. These schemata fall into three categories.

- **Role-schemata:** our individual thoughts about what constitutes behaviours associated with a particular social role e.g. teacher, police, church minister or priest. Hamilton (1981) believes role-schemata are the key to the formation of **stereotypes**.

- **Person-schemata:** our thoughts or ***mental representations*** about what we know about the people in our social world. Person-schemata will often contain both factual information about the people in our social world and aspects of their personality. We use our person-schemata to make judgements about people e.g. what particular Christmas present is most appropriate to their individual tastes.

- **Self-schemata:** is closely linked to our self-concept. It contains thoughts about how good/bad/indifferent we feel we are at things: this is known as our ***self-efficacy beliefs*** [Bandura (1989)]. The higher our self-efficacy belief about our competence to do things the greater our achievement motivation. If we have high self-efficacy cognition Bandura (1989) said that we will try harder and be more prepared to put in the necessary effort to achieve whatever we set out to do. Low self-efficacy, or thinking less of your ability or self, sees people giving up. This is a negative behaviour in the psychological sense. Teachers, for example, often have to raise their pupils/students self-belief before commencing a course with them. Individually and collectively pupils/students success on the course is enhanced - especially if the teacher continually reinforces this raised self-perception.

These schemata will often bias our behaviour and judgement about others and ourself respective social roles then and in the future. We operate on, and within, our known social environment on the basis of **stereotype**. If we move into a strange social environment we are initially less likely to make judgements and behave in a stereotypical way towards others. We are much more thoughtful about our new experiences in our new environment. This can affect previously formed social cognitions.

As a consequence new thinking emerges which in turn influences behaviour. An example of this might be the little known summer camps in Scotland, which annually bring together adolescents from both sides of the sectarian divide in Northern Ireland. The purpose of the camp is to have these teenagers return to their communities with a different and more positive idea about people whom they previously judged on stereotype alone. The importance of working together to achieve a greater good is also encouraged. Thoughts and feelings about, and behaviour towards each other alters during the camp - hopefully for evermore!

What should be said is that the greater the length of time particular thought patterns or schemata have to become formed the more difficult they are to change. No wonder the ups and downs of the current peace process. Social cognitions become even further entrenched when coupled with our emotions. The anger and aggression which accompanies a march or demonstration in Northern Ireland does much to fuel long-held, and unhelpful, social cognitions among nationalist and loyalist alike. Peace and progress becomes even more difficult.

The media

While more the province of social psychology, the influence of the media on adolescent social (and related moral and emotional) development should be mentioned - if only to explode certain myths about the media's power.

'The media' is the collective name given to those businesses involved in communicating information to us. The media is thus television; radio; newspapers and magazines and related industries like advertising, public relations and entertainment.

Social psychology tells us that the 'media' as such does not form attitudes but reinforces already established ones. In order to get us to behave in a particular way e.g. buy a new product, the advertising media, would have to change our thoughts or cognitions about the 'old' product - with which up until then we are perfectly happy. This is known as the ***cognitive component*** of an attitude whereby they have to motivate us to change our beliefs and expectations. This is not an easy job. They also have to change how we *feel* about the old/new product playing upon the ***affective component*** of attitudes. This they often do by associating a particular product with a **role model** or lifestyle and hope we feel more inclined to change our attitude to the old product and buy the new. This is because we want to behave in the same way as the role model or lifestyle we admire and want for ourself.

Adverts will sometimes also try and work directly on the ***behavioural component*** of our attitude by appealing to us to act immediately. More and more 'service' related advertisements on our television nowadays will see an 'ordinary' member of the public pick up a 'phone to call the company offering the service. It is hoped that the viewer will do the same. Changing attitudes is extremely complex however and often has to be approached taking the person's beliefs and expectations; feelings and behaviour into account. The **cognitive** (what we think), **affective** (how we feel) and **behavioural** (how we act) **components** of attitudes have all to become consistent with one another before it can be truly said a particular attitude has changed.

The content of the media we become exposed to can obviously lead to thinking about others and ourself in a particular way. How we think can effect how we feel and behave. Ultimately this can influence who we think we are. **Identity** and **identity formation** can for some be influenced to a degree by the media: or more accurately the content of the media they relate towards.

Adolescence is a period of identity formation and *sometimes* the media can enhance or hinder this. Australian soaps are very popular with Scottish teenage girls. Many want to emulate the looks and related social and emotional world of the cast. Genetically and environmentally this is impossible. Some Scottish girls may see the physical attractiveness of the entire cast as the '*norm*'. They want to be like them but cannot. As a result their self-image and self-esteem is lowered. This can have a detrimental effect for some. British teenage dramas e.g. *Grange Hill* or *Byker Grove* deliberately reflect more accurately the world of the British adolescent, address real issues and put forward in an entertaining, informative and constructive way, helpful solutions to many of the challenges UK teenagers face today.

SUMMARY: ADOLESCENCE

It should be clear that adolescence is a distinct period of physical development between childhood and adulthood that triggers complementary cognitive, social and emotional changes and developments. Greater awareness of physical self gives rise to a period of identity formation, or 'finding oneself', which is linked to cognitive and social factors. As a consequence of our social experiences we constantly revise our thoughts concerning who we think we are and what we hope to become. The connection between our psychological 'self' and our social world is illustrated by Erikson's psychosocial theory of personality development at his identity v role confusion stage. By the end of this stage we should have effectively integrated our psychological self and social identity. This is essential to the development of personality.

Being content with who you are in relation to your external world would be the psychologically healthy outcome of the identity v role confusion stage. The search, revision and confirmation of identity during adolescence can be helped or hindered by parents; teachers; peer group and the media. Our socialisation process and the variety of experiences we come across all help to form social cognitions or how we think, and subsequently how we each feel and behave in our social world. The physical, cognitive and social all come together in adolescence to influence an important emotional side to being human, our search to discover our unique identity, or, who we truly are.

ADULTHOOD

When *do* we become an adult*?* At a psychological level 'adulthood' is identified by two biologically-based universal theories of psychosocial development: one of which we have already come across.

1. ***Erikson's psychosocial theory, 1963*** following on from his adolescent psychosocial crisis of identity v role confusion; his psychosocial theory of personality change in early and middle adulthood covers two psychosocial phases or periods of change in our life namely ***identity v. isolation*** and ***generativity v. stagnation***

2. ***Levinson et al's life-structure theory, 1978*** which divides our ***life structure*** into five eras or periods or phases of adult experiences felt to be common to us all. Of interest to us are ***his early adult transition*** and ***midlife transition*** periods that span the movement from adolescence into full adulthood.

Both theories share a 'milestone' or 'ladder' like approach to identifying inevitable stages in our lives, and, at a simple level are differentiated from each other in that Erikson concentrates on *crises* while Levinson concentrates on chronological age or particular '*seasons of a man's life*' Both theories have relevance for Intermediate 1/2 developmental psychology. Adulthood is further identified by major life changes e.g. ***employment, marriage, parenthood*** and ***bereavement*** and should also be a time where a stable, more mature personality develops and crystallises.

From the point of view of theory, whether personality is fixed by adulthood and all enduring until death is questionable. This is because of the changing world we live in and the dynamic personal, social, political and economic structures and relationships which we develop within it. Put bluntly, if finding stable satisfying employment is a universal mark of adulthood and psychological health - many people in Britain who entered the chronological era of adulthood from about 1979 onwards have yet to experience it! Both theories have becoming more culture-specific and historical as time marches on. Personal, social and cultural forces as they act on the individual should now also be taken into account in our understanding of adulthood as a time of emotional stability and maturity.

Chronological adulthood

Early/young adulthood: our 20s and 30s

Middle age/adulthood: our 40s and 50s

Late adulthood or old age: 60+

Erik Erikson's psychosocial theory of personality development: adulthood

Early adulthood: Intimacy v isolation 20s-30s

This is the age-stage where we search for a partner with whom we think we want to spend the rest of our life. Biologically, socially and emotionally there is a great drive for **intimacy** with another during this time. Everyone else around us, it seems is doing the same thing. Everyone else seems to be looking for, or, have found love. How successful, or otherwise, we are during this psychosocial stage sees us either form an intimate, loving relationship with another or doubt our ability to do so and face a lifetime of isolation and loneliness. Erikson thinks the key to intimacy is the successful finding of identity during adolescence - the resolution and integration of all our various roles into one all enduring and stable personality.

Genuine intimacy sees us happily giving up something of ourself. An understood identity is a prerequisite of this. It is difficult to 'lose oneself in another' unless you know who you are and where you want to go in life. The downside of this stage - a feeling of loneliness or isolation - can be extremely destructive for individuals. It should be noted that 'intimacy', or a deep meaningful relationship with another, is not entirely meant in a sexual sense. Intimacy in our 20s can be equally found with a very close friend. By sharing who we are with another we come to confirm and know who we are better.

Problems with the universal and current applicability of Erikson's theory regards **intimacy v isolation** in early adulthood are that:

1. Many do not find their true identity during adolescence and are still trying to search for, revise and confirm who they are during (at least) early adulthood. Erikson felt identity an important prerequisite to intimacy.

2. More and more people, especially the middle-class, are putting off getting married until they are in their 30s. They are concentrating on career and living in less formal relationships than their working class married counterparts.

3. If divorce statistics are any measure finding and sustaining long-term intimacy with another is problematic for many.

4. Gilligan (1982) believes that men seek to achieve identity *before* intimacy while women seek identity *through* intimacy. The applicability of the theory as universal to both sexes is therefore put into question.

Middle adulthood: Generativity v stagnation 30s-50s

When Erikson was writing in the 1960s and 70s he observed that then childcare responsibilities for adults in their 30s to 50s steadily diminish. As a result he says we are able to turn and begin to examine how ***productive*** and ***creative*** our *work* and *relationships* are. Our middle adult years see us finding a ***purpose*** and ***direction*** to life. Very often we use this time to widen our education; which helps us to better understand ourself in our complex world, and also give something of ourselves back to the work place, trade union, club, community group, religious organisation etc. to

which we belong. We actively go out and benefit others and simultaneously feel good that we have 'made a contribution' in our own unique way. This is **generativity**, the positive psychosocial outcome of this stage. Generativity gives our life a **directive framework**.

If, however you find that your life has become unproductive, routine and stagnant, we feel psychosocially and psychologically unfulfilled. There is something missing from our lifelong quest to discover what it means to be human. We lose direction and purpose in life. This is **stagnation**, the negative psychosocial outcome of this stage. Problems with the universal and current applicability of Erikson's theory regards **generativity v stagnation** in middle-adulthood are that:

1. From the 1970s onwards economic and political considerations determined many millions of people in the UK to experience only stagnation - if Erikson is correct when he says our middle adult years is a time to reflect on productivity and creativity at work. By the mid-1990s there was hardly anywhere or any class of people in the UK who had not been affected by unemployment.

2. Unemployment leads to aimlessness and despair. People who are in despair are unlikely to turn their attention to the well being of others.

3. A person who *had* confirmed their identity through intimacy and *was* generative could often find that, as a consequence of unemployment, they entered a *downward spiral* of psychosocial crises. They experienced stagnation in that they could not find a similar - or any - job. This caused intense friction in a home they could no longer afford. Relationships came under intense pressure. Old friends no longer called. You lose the directive framework within which your previous generative identity sat.

4. That despite unemployment and it's effects, there are examples of humankind adapting successfully to their changing circumstance. The creative aspect to generativity can be redirected and reborn. A downward spiral can be averted. Many also continue to give much of themselves to others, despite being unable to fulfil productivity and creativity in a *formal* work sense.

5. A means to a secure source of income, and not just commonly shared biological determinants, would seem to influence greatly the psychosocial outcome of generativity v stagnation. Being generative is a desired as opposed to almost automatic positive outcome to our middle adult years.

One need only to see the brilliant UK film 'The Full Monty' to appreciate much of the above criticism.

Late adulthood/old age: Integrity v despair 60s+

This sees us approach the inevitable end of our life. During this stage we ***reflect*** on what our ***past life*** has been like and what sort of difference we have made as individuals. We each weigh up our life 'balance-sheet'. Was it good, bad or indifferent? If, on balance, we feel we have had a good and worthwhile life - as a

result of successive positive psychosocial outcomes when faced with psychosocial crisis we go to our deaths feeling good and at peace. If it has been not so good we may feel despair and a sense of never having been on earth in the first place. This is the negative outcome of Erikson's final psychosocial stage.

Erikson's integrity v despair stage emphasises the possibility of *revision of negative outcomes,* revisiting them and making more positive choices as a result. This last stage very often sees older people reflecting back on life and trying to make amends and build bridges with people they feel they have previously done an injustice. In a family sense this would be when a parent; brother or sister, aunt or uncle began to speak with another in the family they have not spoken to for many years. This may very well see the older person approaching death more at peace with themselves for having 'made-up' with another, which probably due to the passage of time is no longer as important as it once was.

Levinson's *Seasons of Man* Approach to Adulthood: A life structure theory

The American psychologist, Daniel J. Levinson also divides adult life into qualitatively different periods. Restricting his study only to men, Levinson (1978) suggested that men share **five eras** within their lives which together create a **life structure** mainly governed by the options and choices we have/make in our life.

The five eras he identified are:

- pre-adulthood (birth to age 22)
- early adulthood (17-45)
- middle adulthood (40-64)
- late adulthood (60-85)
- late late adulthood (80+).

Early adulthood (17-45)

Each of the five eras has transitional periods that link them. These transitional periods contain major life events, which further governs the structure to our life based on the options and choices we make when they occur.

In the normal everyday sense early adulthood in Scotland is from about age 16 or 17 to 22 or 23. This is for Levinson the first major transition period in life that represents a developmental link between the ***pre-adulthood*** and ***early adulthood eras***. The young man in this **early adult transition** faces two major tasks. The first is to discover who he is (identity) in relation to his family, peer group and others. The second is to take a preliminary step into the adult world. Major **life events** like leaving school, setting up your own home, finding work, going to college/university, will effect both of these and be building blocks to that person's overall life structure.

During this time Levinson says we explore and make small commitments to adult roles and responsibilities. We also like the feeling of freedom we get in keeping our options open. A student for example may use their time at college or university to involve themselves in student affairs that may or may not effect the vocational choices they make and thus influence the overall structure of their life. At one and the same time the adult in transition is increasingly aware of the pressure to settle down. Important **marker** or ***critical life events*** that will effect their life structure during this time will be

occupational choice or lack of it, your first job, marriage and the birth of children.

The age range 28-33 represents the next **young adult transition** within Levinson's early adulthood period. This period sees the young man adjust and build upon the early adult life he has created for himself. He will be trying to establish a pattern to his adult life regarding relationships, work and society. He has a greater knowledge of himself. Often men in this age group experience a serious crisis in the form of unemployment or divorce. Hopefully then follows a ***settling-down period*** from the early 30s to about age 40. This is a period of early adulthood that sees a move towards ***stability*** and ***security*** in the life structure. Men here are seen to make a deeper and greater commitment to their job, family hobby etc.

Showing a distinct middle-class American slant to the theory, Levinson further says that this time sees men increasingly pre-occupied with 'making it' in a vocational and financial sense. It is a time where man's own small American dream is realised. Key life events during this period are promotion:

Middle adulthood (45-64)

The **midlife transition** spans four to six years reaching a peak in the early 40s. The midlife transition forms a developmental link between early adulthood and middle adulthood, and being part of both eras, represents a beginning and an end, a meeting of past and future. The midlife transition is a time of taking stock. A task of the midlife transition is to work on and partly resolve the discrepancy between *what is* and *what might be*. We reflect on from where we have come; where we have got to and where we might end up going. This transition to being essentially happy with our self *might* be smooth, but is more likely to involve considerable turmoil for the individual as he looks back at previous eras in the life structure and the various opportunities lost or squandered and choices made. This can trigger a ***midlife crisis*** where some vainly try to recapture a lost past (Sheehy, 1977). The period of entering middle adulthood begins at age 45 until about age 50. Sometimes the beginning of this new life structure is triggered by a significant life event such as a change of job, a divorce, love affair, serious illness or bereavement.

Levinson's theory concerning eight *seasons in a man's life* must only be seen as appropriate to a middle-class male America. Erikson expressly, and Levinson by implication, suggest our psychosocial development occurs in discontinuous stages and that one is progressively and qualitatively different from the last. The social experiences which adults come across are not universal. What is apparent is that **marker** or **critical life events** in whatever form i.e. social in the form of unemployment or biological in the form of illness or accident effect us all but in unequal measure. How we handle these critical life events differ from person to person. Success in doing so can and does effect how we perceive our self, how we think about our self in relation to the rest of the world and how we behave in it. This is all bound up in personality. The inter-relationship between our biology, our social world, our cognitions and our emotional development during adulthood *may* lead to a stable and enduring personality and a better understanding of self. On the other hand they may not.

Marker or critical life events in Levinson's *Seasons of Man* Life Structure Theory

Between pre-adulthood and early adulthood

Early adult transition: markers

Leaving school
Setting up your own home
Getting a job
Going to college/university
Marriage
Birth of children

Between early adulthood and middle adulthood

Young adult transition: markers

Promotion
Sustaining a job
Successful marital life
Deeper commitment to family; job; hobbies etc.

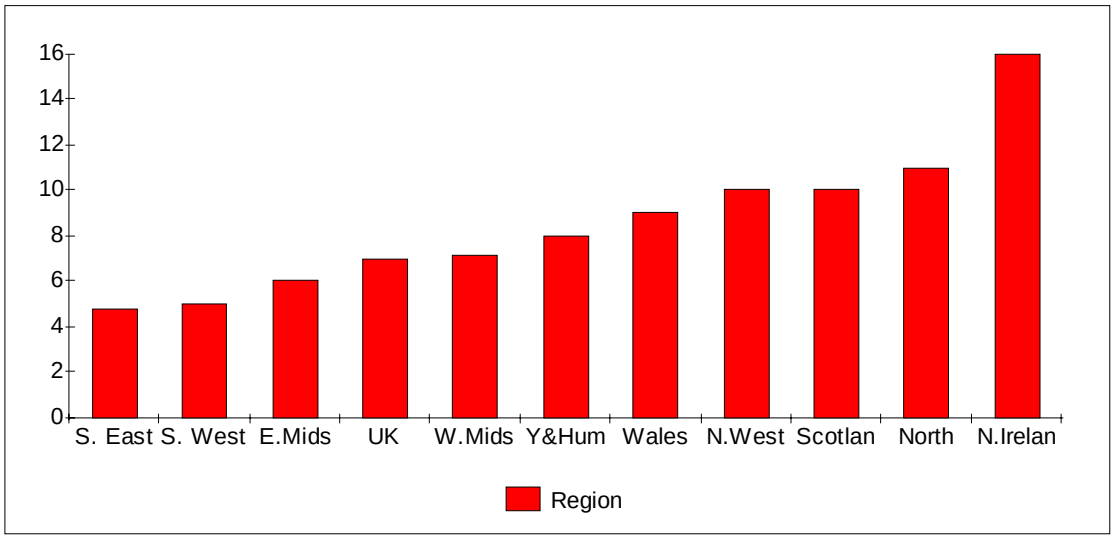
Between middle adulthood and late adulthood

Midlife transition: markers

Change of job
Loss of job
Divorce
Love affair
Second or subsequent marriage
Serious illness
Bereavement

The impact of a critical life event: Unemployment

***'Everybody needs to be needed, and for many people a job is an essential element in feeling needed.'* Charter for Jobs**



From 1979 until 1997 the United Kingdom enjoyed a Conservative government. A major plank of Conservative policy was to abandon government aid for failing industries in both the private and public sector. The '*free market*' and not the government was to control and determine the economy. The effects of this, coupled with almost uncontrollable inflation and a downturn in the world economy, had a devastating impact throughout the United Kingdom on people's ability to find, keep, and sustain employment. Initially unemployment struck those in heavy manufacturing industry most, however by the middle of the 1990s almost every household in the UK knew of someone who had lost their job or was having great difficulty finding one. Unemployment cut across region, occupation and class. Some parts of the country were hit more than others and are still unemployment blackspots. Midway through the 18 years of the last UK government Londonderry had 26% unemployed, Lanarkshire 16%, South Tyneside 20%, Liverpool 17% and Doncaster 16%. By contrast the South East of England had Crawley, Cambridge and Basingstoke all at 3%.

Michael Argyle (1989) says unemployment has a number of psychological effects The first is **depression** which is more prevalent, long-term and prolonged among the unemployed than working population. He also found a strong **correlation** between depression and the length of time unemployed. Sigelman (1975) suggests that over time the unemployed develop what he calls *learned helplessness* in that they blamed themselves and thought nothing could be done to better their situation. He further discovered associated poverty exacerbated depression, and leads to increased suicides amongst those unemployed.

In a British context, many of the psychological effects of unemployment were brilliantly portrayed and characterised in the recent movie success '*The Full Monty*'.

Unemployment also leads to a ***loss of self-esteem***, a term first come across when we looked at *Humanistic Psychology* in *'Psychology: An Introduction'*, which means how much we value ourself. Loss of self-esteem especially effects unemployed men, who traditionally view themselves as the family breadwinner. Being on a giro after many years in work is also very demeaning. At home, previous luxuries are no longer an option. Financially things are very tight. There are greater tensions at home. Children are not always sympathetic to their parent's financial difficulties. The home etc. becomes dilapidated due to lack of money. Clothes begin to look dowdy and old-fashioned. This creates great emotional distress and psychological ill-health for an unemployed person and those around him or her.

In a 10 year census study of British men who had become unemployed, Moser *et al* (1984) report that their death rate was 35% higher than for the whole population of males between 15 and 64. 20% of wives of unemployed males were found to be more likely to die prematurely. A figure which according to Fryer (1992, 1995) has increased in the 1990s.

Love

Although there are growing exceptions to the social norm of falling in love and settling down by our 20s, the vast majority of us engage in intimate romantic relationships with another during early adulthood. We hope that result will be a '*Till Death Do Us Part*' marital type relationship. The glue to success lies in the idea of 'love'. This begs two $64 000 questions:

What is, and why do we fall in, love?

In the romantic sense *love* is an emotion we *feel* towards another person. The emotion is a direct result of biological and genetic factors that trigger in most of us the need to ensure the survival of our species. *Love* is also influenced by social factors. A prerequisite to '*falling in love*' is mutual attraction between two people. Surprisingly this is physiological (brain and central nervous system) in nature. If we find ourself attracted to another person we try to make eye contact with them. If there is mutual attraction each person's pupils will dilate for a fraction of a second when both make simultaneous eye contact with one another. This signal is made independently and unconsciously. It makes the next step to a romantic relationship i.e. having the nerve to talk to each other, that much easier! Romantic love may then just be around the corner. The power of the eyes has been known for thousands of years. Ancient (in the historical sense) Egyptian women used *kohl* to highlight their eyes. The cosmetic and optic industries today exploit this knowledge.

August 1999 saw reports that the *feeling* of romantic love may be as a consequence of the release of hormones in the brain that create the emotional state we call 'love'. The hormonal release produces an intense mood state that influences our thoughts and thus our behaviour. We feel pleasure being in love with another. The emotional experience of 'falling in love' can strike at any time. It is ***non-habitual*** in that *falling in love* does

not happen in a regular cycle for us, but is a reaction to a specific experience i.e. meeting Mr or Mrs 'Right'....we hope.

Scientists found the hormonal release to last two years at most. Just about the right time to observe all the 'rules' concerning courtship, get married and have a first child! The human ability to experience the feeling of falling in love may very well be an ***evolutionary algorithm*** (a inherited genetic code) within our DNA (deoxyribonucleic acid) necessary to the survival of the species. It appears that *love* and *falling in love* may then be as a result of man's evolutionary adaptation in order to survive and ensure the survival of the species.

It is very apparent in Scotland that while most adults observe the convention of marriage, more and more marriages are ending in divorce. The reasons for divorce are complex and depressing. One factor that might influence marital success is personality.

Personality

Personality concerns the consistent stable characteristics that underlie our behaviours over time and in different situations. These characteristics we call **traits**. ***Traits*** have been identified, observed and measured in us as ***patterns of similar behaviours***. While each of us have a particular set of traits (accounting for individual differences in personality) which make our individual personalities ***unique***, psychologists have also been able to discover those personality characteristics which we ***share*** in a general sense. As a result they have been able to identify general personality **types**, each of which share a common set of behaviours.

Hans Eysenck, for example, found he was able to measure and identify four general personalities along two major personality trait dimensions of ***neuroticism-stability*** and ***extroversion-introversion*** - which he says are common to us all. The traits of personality that went to make up the two dimensions Eysenck thought to be genetically inherited. This is the **nativist** position that is no longer appropriate regards personality. While it is possible that we inherit what are called infant **temperaments**, the unique personality we develop is shaped over the human lifespan and is as a consequence of the interaction of the particular and peculiar set of cognitive; social and emotional experiences we encounter in our environment.

Personality after about age 7 *can* be recognisable, relatively fixed, all enduring and evident throughout our life, but it is now thought that major personality change, or shifts, are also possible. This is because of the *dynamic* and complex relationship between our biology, social world, cognitions and emotions. Thus someone with a set of identified personality traits in early adulthood such as Eysenck's neurotic-extravert can begin to become much less so due to a particular life event in their adult life. The outrageous alcoholic may decide to wisely give up alcohol for health and emotional reasons. They find they no longer want or need the old social network of the pub. They think, feel and behave differently than before concerning themselves and others. Indeed they are happier with their perception of their 'new' and truer self.

The biological, cognitive, social and emotional all come together and this can give rise to a qualitatively different personality which can endure over the rest of that person's life. So while personality can become more fixed, stable and evident during the adult lifespan, major life events such as parenthood, marriage/divorce, employment/unemployment, bereavement, illness can influence the stability or instability of current personality. While generally fixed, aspects and pre-dominant behavioural traits of a personality *can* and *do* change.

Hans Eysenck's Personality Theory

Hans Jurgen Eysenck 1916-1997 had a tremendous influence in both academic psychology and the opening up of the subject of mind and behaviour to ordinary people. A professor of psychology at the University of London Institute of Psychiatry he published around 60 books and more than 1000 scientific papers during his lifetime. His most important contributions were in the areas of personality and intelligence, both aspects of individuals Eysenck felt were influenced greatly by genetics and parental biology. A **nativist** he saw individual differences such as personality and intelligence as influenced much more by our genetics and biological parents than our environment. Hans Eysenck as he perceived life did not suffer fools gladly and this probably denied him the ultimate recognition of a knighthood for his contribution to British psychology.

While working at the Maudsley Hospital in London during and after the Second World War, Eysenck (1947) put together a battery of questionnaires that he gave to 700 psychologically neurotic soldiers. He noticed a similarity of answers to the questions and thought it possible that certain personality traits were shared by large groups of people. Using a statistical technique called **factor analysis** he put together a questionnaire called the **Eysenck Personality Inventory** or **EPI** which when completed can reveal where we all lie along two personality dimensions. These dimensions he named **introversion-extraversion** and **neurotic-stable**, both of which he saw as having a biological base and are normally distributed among the adult population. The EPI can identify what general personality we have and can also tell us what our particular scores mean for us as a result of where they lie on the two dimensions.

Generally, stable extroverts will be sociable, outgoing, talkative, responsive to others, easygoing, lively, carefree, and show leadership: unstable extroverts will be more active in a frenetic sense, optimistic, impulsive, have wild mood swings, and be aggressive and restless. Stable introverts will be calm, even-tempered, reliable, controlled, peaceful, thoughtful, carefree and passive while neurotic introverts will be quiet, unsociable, reserved, pessimistic, sober, rigid, anxious and moody.

Interestingly, Eysenck's four general categories of personality are consistent with the sanguine, choleric, phlegmatic and melancholic personality 'humours' identified by the ancient Greeks and thought then to be due to the higher proportions of bodily fluids (blood; phlegm; yellow and black bile) we each were thought to have in our body. In later years Eysenck (1976) added a third personality dimension to his EPI: that of **psychoticism** which is not normally distributed in the population.

Psychoticism, as measured by his **EPQ** (*Eysenck Personality Questionnaire*) is seen in a small number of the population whose anti-social behaviours do not conform to society's rules and conventions.

SUMMARY: OPTIONAL KEY CONCEPT: ADOLESCENCE AND ADULTHOOD

The optional key concept of Adolescence and Adulthood emphasises personality change and social development in adolescence, personality change and social development in adulthood and life changes and development.

Puberty triggers cognitive, social and emotional development throughout the course of adolescence. As a result of the genetic imperative to ensure the survival of humankind, we are physically, cognitively, socially and emotionally driven to become independent of our parents. The main focus during adolescence is the search, revision and confirmation of identity and finding oneself in both a psychological and social sense.

The experiences we have in our social world go some way towards forming aspects of self (self-esteem, self-respect and self awareness), thoughts, beliefs, personality and related behaviours. These experiences, and what we take from them, all contribute towards exploration and revision of identity during the teenage years. According to Erikson by the end of adolescence we should have resolved the psychosocial crisis of identity v. role confusion/diffusion. We should have developed identity integration. Identity integration is influenced by our parents, teachers, peer groups and the media. The peer group is especially important in helping us discover who we think we are. The inter-relationship between our changing biology, thoughts and feelings plus the expanding social networks of friends, community, clubs, workplace; college/university etc. allow us to also discover the sexual side to our nature. This leads to the desire to develop a deep meaningful relationship with another during this time and forever more.

The adult years can be a time of change *or* stability. Changes in employment status, marital success or otherwise, being a parent, illness and death of someone close can have a positive or negative effect on a person's self, self-respect, self-esteem, personality and behaviour. According to both Erikson and Levinson stability of life during the adult years can lead to a more psychologically happy and fulfilled person. This stability is much to do with knowing who you really are from the point of view of your identity in your social world; forming and sustaining an intimate and loving relationship in adulthood with another and trying to deal with critical life events in a emphatic manner.

GLOSSARY: ADOLESCENCE

adolescent growth spurt: a period of **physiological maturation** (bodily change and physical growth) associated with early adolescence (the other being **sexual maturation** identified by ***puberty***). The adolescent growth spurt is associated with hormonal changes triggered within the hypothalamus.

androgen: a male hormone, giving rise to male sexual characteristics, the most important one of which is ***testosterone*** released by the testes.

child-rearing style: the style of upbringing and quality of interactions parents (and other adults) use with children and teenagers has been identified as important to their development of self, personality, skills, abilities etc. Parenting styles can be classified as a) authoritarian parenting, b) authoritative parenting and c) permissive parenting.

depression: a mood disorder where there is experienced great sadness, feelings of self-loathing and guilt. In this mood state life often becomes overpowering. Major depression (unipolar disorder) is indicated by a sad depressed mood; loss of interest and pleasure in usual activities; sleep problems; excitability or lethargy; poor appetite; weight loss/weight gain; listlessness; tiredness; poor self-concept; inability to concentrate; cognitive difficulties etc.

drive states: the motivational state we are in initiated by our biology and physiology e.g. hunger pangs make us feel hungry and we want to eat.

ego identity: to know one's self.

eras: associated with Levinson's *Seasons of Man approach*, Levinson divides the human lifespan or ***life structure*** into five phases, or ***eras***, each of which also involves a transition from one period of our life to the next. Important to adult personality development for Levinson are the experiences we have during his ***early adult transition*** and ***midlife transition*** phases.

Eysenck: Hans Jurgen Eysenck 1916-1997 was a professor of psychology at the University of London Institute of Psychiatry and published around 60 books and more than 1000 scientific papers during his lifetime. His most important contributions were in the areas of personality and intelligence, both aspects of individuals Eysenck felt were influenced greatly by genetics and parental biology. A *nativist* he saw individual differences - such as personality and intelligence - as influenced much more by our genetics and biological parents than our environment. He was the first academic psychologist to deliberately popularise the subject and is remembered best for his personality 'test' - or inventory- the EPI (Eysenck Personality Inventory).

Eysenck Personality Inventory or **EPI**: a psychometric test/measure of personality along two dimensions; extroversion-introversion; neurotic-stable developed by the late Professor Hans Eysenck.

factor analysis: statistical method used by Eysenck to help sift and analyse questionnaires he gave to 700 neurotic soldiers in the 1940s which went to help construct his Personality Inventory.

generativity: the positive outcome of Erikson's second stage of adult psychosocial development (30s-50s). An adult who is *generative* will be one who is productive and creative in work and personal relationships. They will give something of her/himself others. He/she may also benefit others in some way and in doing so will feel good in themselves that they have got on in life at a personal level and have simultaneously unselfishly '*made a contribution*' to the good of others.

generativity v stagnation: Erikson's second stage of adult psychosocial development. *Generativity* (above) is the positive outcome and *stagnation* the negative. If you find in your 30s to 50s that your life is unproductive, routine and stagnant, you may feel psychosocially and psychologically unfulfilled. The feeling that there is something missing from our life is at the least psychologically uncomfortable and at most psychologically unhealthy. The person loses direction and purpose in life.

humanistic approach: an approach in psychology which believes we are biologically motivated to personally grow, create and to love. It sees human beings as being able to shape their own destinies and that the experiences we encounter in our journey through life can influence this greatly in a positive or negative way. It gives great weight to how individual's see and interpret their own reality (*subjective experiences*) in relation to their own thoughts, beliefs and behaviours. Frustration of personal growth can lead to a psychologically unhealthy person.

hypothalamus: a small structure, four grams in weight and about one cubic centimetre in the *forebrain* (cerebral cortex, basal ganglia and limbic system), the *hypothalamus* secretes hormones into the bloodstream and is directly and indirectly responsible for a variety of physiological and psychological behaviours. The onset of puberty is a good example of this. Because it is connected with the autonomic centres of the brainstem, the hypothalamus also automatically controls and regulates our emotional arousal states e.g. heart rate, pupil dilation, saliva flow

pituitary gland: regulated by the hypothalamus, and found just below it, the *pituitary gland* influences our endocrine system (testosterone in males, oestrogen and progesterone in females, adrenaline and noradrenaline; insulin etc.)

identity: your sense of *self*. For Erikson the search for, revision and confirmation of identity is the major task for teenagers during his adolescent psychosocial *identity v role confusion/diffusion* stage.

identity formation: parents, teachers and peer groups all help the individual to realise their own unique identity or self. During childhood and adolescence parents, teachers and the peer group (our group of friends) help us to become aware of who we are. How we are brought up, how adults interact and respond to us, and the experiences we get from and with our friends all go towards the formation and realisation of our identity.

identity v role confusion/diffusion: Erikson's adolescent stage of psychosocial development. Inspired by physiological changes due to puberty the teenage years see the search for, revision of and confirmation of who we think we actually are (identity). Failure to do so can lead to a confused personality and problems with sustaining relationships with others.

integrity v despair: is the last stage of Erikson's theory of psychosocial crisis from about age 60+. Here the psychosocial task is to reflect back on our self and our life. We consider the work, social and emotional relationships we have had. We create a kind of 'balance sheet' concerning the quality of our life. Often we seek to make amends with others we have hurt in some way during our life. The positive outcome of *integrity v despair* is that we go to our death feeling good about our self and our life. The negative outcome is a feeling of despair that our life has been a waste of time.

intimacy: the positive outcome of Erikson's early (20s-30s) adult psychosocial stage of *intimacy v isolation*. This is the age-stage where we search for a partner with whom we think we want to spend the rest of our life. Biologically, socially and emotionally there is a great drive for intimacy - or to fall in love and settle down - with another during this time. We try to find ourself in another. How successful, or otherwise, we are during this psychosocial stage sees us either form an intimate, loving relationship with another or doubt our ability to do so and facing a lifetime of isolation and loneliness.

intimacy v isolation: See above. Erikson's 20s-30s early adult stage of psychosocial development which sees us strive to find a deep loving relationship with another person.

introversion-extraversion: one of Eysenck's two personality dimensions in his EPI (Eysenck Personality Inventory) upon which he says an important aspect of our personality lie. We can measure, using the EPI, how much introverted or extroverted behaviour we show when with others.

labelling: a sociological term where an individual is perceived in a particular way by a teacher, policeman etc. because of that person's earlier positive or negative experiences with *another* member of their family.

young adult transition: a transitional stage in Levinson's Seasons of Man theory of personality which is a bridge of formative experiences between adolescence and middle adulthood. How successful we are in these **marker** or critical life events experiences shapes who we are e.g. successful marriage or bitter divorce, a good job or no job at all etc.

midlife transition: a transitional stage in Levinson's Seasons of Man theory of personality which is a bridge of formative experiences between early adulthood and middle adulthood. Our experiences in how successful we are with coming to terms with no longer being young, having and wanting responsibilities and successfully or otherwise settling down all contribute to the lifestructure personality.

life structure: central to Levinson's Seasons of Man theory of personality. He identifies a common life structure to a man's life. These are pre-adulthood (birth to age 22): early adulthood (17-45): middle adulthood (40-64): late adulthood (60-85) and late, late adulthood (80+). During each phase, or transition, there are formative **markers** or critical life events which, dependent on how each male deals with them go some way to form their life structure *personality*.

maturation: biological ageing.

media: a general term which includes such sources of communication as TV, newspapers, magazines, radio etc.

nativist: someone who believes our intelligence and/or personality is inherited from our biological parents.

neurotic-stable: : one of Eysenck's two personality dimensions in his EPI (Eysenck Personality Inventory) common to us all and which we each exhibit in our extroverted-introverted behaviours to differing degrees. We can measure, using the EPI, how much neurotic-extrovert; stable-extrovert; neurotic introvert and stable introvert thoughts, beliefs and behaviours we each show through our '*personality*'.

oestrogen: term for a number of hormones which are necessary for female sexuality and reproduction.

phenomenological field: a person's experiences, conscious and unconscious he/she comes across in life which influences that person's *self*.

psyche: a term used in humanistic psychology to refer to our *soul*, inner self or essence of being (how we feel about our self and our self in relation to others).

psychoticism: Eysenck later revised his EPI and added another dimension to personality - psychoticism - which unlike his introversion-extroversion and neurotic-stable dimensions are not normally distributed between us all. He felt between 2-5% of the total population has psychotic or *anti-social personalities*. These people are known in the Scottish judicial system as *sociopaths*.

puberty: the period of physical and sexual development at the end of childhood. Puberty, in general, starts two years earlier in girls than in boys (from age 10 as opposed to around age 12). Despite boys entering puberty later than girls they soon catch up by age 14, and indeed exceed female physical growth. This can be seen when comparing height, weight, body mass etc.

schemata: Piaget's *organised structure of knowledge* within us which changes, develops, and matures as a result of biological age and experience.

self: humanistic term which refers to our sense of unique personal *identity* and our identity in relation to our environment.

self awareness: how conscious we are regards who we are and who/what has contributed towards making us who we are.

self-esteem: the value and respect we place in ourself.

social cognition: a term used in social psychology to help us understand that our thoughts come from, and are influenced by, the environment we find ourself in. Our social cognitions influence our behaviour.

socialisation: sociological term which concerns the process of learning and accepting our society's norms, beliefs and values. Important to the socialisation process are parents, teachers and our peer group.

stagnation: Erikson's second stage of adult psychosocial development. *Generativity* (above) is the positive outcome and *stagnation* the negative. If you find in your 30s to 50s that your life is unproductive, routine and stagnant, you may feel psychosocially and psychologically unfulfilled. The feeling that there is something missing from our life is at the least psychologically uncomfortable and at most psychologically unhealthy. The person loses direction and purpose in life.

temperaments: an idea stretching back to Ancient Greece which believes that we may be born with a tendency towards a particular mood direction e.g. a happy baby; a grumpy baby. Temperament may be the base of adult personality.

traits: Eysenck believed that we all share four common genetically based personality characteristics (introversion-extroversion; neurotic-stable) but not in equal proportion to each other.

types: related to personality traits, psychologists have tried to classify people with an identified and fixed number of personality characteristics into personality *types*.

STUDENT ACTIVITIES FOR ADOLESCENCE AND ADULTHOOD

1. What do you think the study of *Adolescence and adulthood* is all about?

2. Identify by ticking in the boxes below what a student of developmental psychology might study in relation to *Adolescence and adulthood*:

perception	☐
the adolescent growth spurt	☐
attention	☐
puberty	☐
identity	☐
language	☐
critical life events	☐
parenting styles	☐
motivation	☐
peer groups	☐
visual illusions	☐
personality	☐
operant conditioning	☐
social cognition	☐

3. Fill in the blank spaces from the word list below:

*negative: personality: identity v. role confusion./diffusion**:** identity self-respect integration: network: marker: change: genetics: teachers: our self**:** identity**:** peer group: positive: self-esteem: the media: stability: critical life events: self awareness**:** cognitive, social and emotional development: beliefs*

Puberty stimulates _____during adolescence. Our _____influences our biology and physiology to ensure the survival of the species. We are physically, cognitively, socially and emotionally driven to become independent of our parents. This sees us during adolescence search for, revise and confirm our _____. We try to find _____.
Our social experiences help to form aspects of self such as _____and _____. Social experiences also influence our thoughts, _____, and related behaviours. Erikson says we should all have resolved who we are by the end of adolescence. This he calls_____. This happens during his psychosocial _____ *stage. Who we are and what we become is heavily influenced by our parents, _____,_____and _____. Our expanding social _____ is also important to the discovery of who we are, why we are, and what we might become. Our adult years see us having to confront many _____ or critical life events. These include marriage, children, divorce, unemployment, illness etc. How we deal with these can influence self and personality in a _____or _____way. Nobody can foretell if adulthood will be a period of _____or _____.*

What can help is knowing who you really are from the point of view of identity in your social world; forming and keeping an intimate and loving relationship with another in adulthood and trying to deal with _____in a decisive and constructive way.

4. ***Wordsearch: Adolescence and adulthood Gigantic Wordsearch***

A period of bodily change and physical growth associated with early adolescence.

Recognised by the onset of puberty.

Male hormone.

The style of upbringing and quality of interactions parents (and other adults) use with children and teenagers.

A mood disorder.

The motivational state we are in initiated by our biology and physiology.

To know one's self.

Five phases of Levinson's Seasons of Man approach.

A psychometric test/measure of personality along two dimensions, extroversion-introversion, neurotic-stable.

Statistical method used by Eysenck to help analyse questionnaires.

The positive outcome of Erikson's second stage of adult psychosocial development (30s-50s).

Erikson's second stage of adult psychosocial development.

An approach in psychology which believes we are biologically motivated to personally grow; create and to love. It sees human beings as being able to shape their own destinies and that the experiences we encounter in our journey through life can influence this greatly in a positive or negative way.

A small structure, four grams in weight and about one cubic centimetre in the forebrain (cerebral cortex, basal ganglia and limbic system).

Regulated by the hypothalamus, and found just below it, this influences our endocrine system.

Your sense of self.

Parents, teachers and peer groups should all help you in adolescence to form this.

Erikson's adolescent stage of psychosocial development.

The last stage of Erikson's theory of psychosocial crisis from about age 60+.

The positive outcome of Erikson's early (20s-30s) adult psychosocial stage.

Erikson's 20s-30s early adult stage of psychosocial development which sees us strive to find a deep loving relationship with another person.

One of Eysenck's two personality dimensions in his EPI (Eysenck Personality Inventory).

A sociological term where an individual is perceived in a particular way by a teacher, police officer etc. because of that person's earlier positive or negative experiences with another member of their family.

A transitional stage in Levinson's Seasons of Man theory of personality which is a bridge of formative experiences between adolescence and middle adulthood.

A transitional stage in Levinson's Seasons of Man theory of personality that is a bridge of formative experiences between early adulthood and middle adulthood.

Central to Levinson's Seasons of Man theory of personality.

Biological ageing.

Someone who believes our intelligence and/or personality is inherited from our biological parents.

One of Eysenck's two personality dimensions in his EPI (Eysenck Personality Inventory) common to us all and which we each exhibit in our extroverted-introverted behaviours to differing degrees.

Term for a number of hormones which are necessary for female sexuality and reproduction.

Your own experiences, conscious and unconscious, that you come across in life which influences your self.

A term used in humanistic psychology to refer to our soul, inner self or essence of being.

Eysenck later revised his EPI and added this dimension to personality that unlike his introversion-extroversion and neurotic-stable dimensions is not normally distributed between us all.

Piaget's organised structure of knowledge within us that changes, develops, and matures as a result of biological age and experience.

Humanistic term which refers to our sense of unique personal identity and our identity in relation to our environment.

How conscious we are regards who we are and who/what has contributed towards making us who we are.

The value and respect we place in ourself.

Term used in social psychology to help us understand that our thoughts come from, and are influenced by, the environment we find ourself in.

Sociological term which concerns the process of learning and accepting our society's norms, beliefs and values.

Erikson's negative outcome at his second stage of adult psychosocial development.

An idea stretching back to Ancient Greece which believes that we may be born with a tendency towards a particular mood direction e.g. a happy baby; a grumpy baby.

Adolescence and adulthood: Gigantic Wordsearch

EysenckPersonalityInventorydepression
generativityvstagnationdrivestateseras
childrearingstylepituitaryglandidentity
introversion-extraversionintimacy
socialvcognitionandrogenegoidentity
labellingidentityvroleconfusion/diffusio
n
selfmaturationhumanisticapproach
schemataadolescentgrowthspurt
sexualmaturationyoungadulttransition
factoranalysisidentityformationnativist
hypothalamusintegrityvdespairpsyche
intimacyvisolationpsychoticism
oestrogenmidlifetransitionlifestructure
neurotic-stablephenomenologicalfield
selfawarenesssocialisationstagnation
temperamentsself-esteemgenerativity

5. **Quick Quiz**

   a) What *four* aspects of change and development are associated and interlinked with each other during adolescence?

   b) Name *3 psychological concepts* which are associated by these 4 changes.

   c) Identify *2 aspects* of physiological developments during *puberty*.

   d) What psychologist is associated with *the Oedipus complex*?

   e) What psychologist is associated with the phrase '*Sturm und Drang*'. What does it mean?

   f) What are the stages of *psychosocial development* associated with *Adolescence and adulthood*?

   g) What does Erikson think we try to confirm during much of this time?

   h) List four *environmental influences* on our *social development* during childhood and adolescence.

   i) What is *labelling*?

   j) What is the *area* of *study* called, central to social psychology, which concerns *the relationship between our thoughts, our social world and our behaviour.*

   k) Identify the three components of '*attitudes*'.

   l) What name is given to *Levinson's* theory of personality?

   m) Why is it called this?

   n) What is the difference between an *era* and a *transition*?

   o) Name an important emotion and interpersonal relationship which is *non-habitual*.

   p) List 4 *marker* events.

   q) What do we call those *consistent stable characteristics which underlie our behaviours over time and in different situations*?

   r) Name *2 dimensions* of *personality*.

   s) What is the essential difference between the *EPI* and the *EPQ*?

   t) What in adult years may lead (according to Erikson and Levinson) to a happy fulfilled person?

6. **Answer the following questions:**

a) Describe the concept of *Adolescence and adulthood*. You answer should identify the four processes of change and development and what their outcome sees us do during our teenage years. *Adulthood* should be identified as a distinct age-stage where change or stability is a result of individual experiences. Experiences and their effects in ***both*** Adolescence and adulthood should be mentioned. Personality should be emphasised with particular regard to Erikson's theory of psychosocial development.

b) What is adolescence? How do teenagers go about searching for their identity as part of a group? What influences external to the group might influence their search?

c) How do teenagers go about searching for their identity within the family? What influences external to the group might influence their search?

d) What is adulthood? How can marker or critical life events influence our cognitive, social and emotional development? How would Levinson understand the development of '*personality*' during our life?

e) Read the following case note.

'Richard Stewart is now 35. He was born and raised in Singapore, the youngest son of a British soldier and his wife - Andy and Mary. The family returned to Scotland when he was 8. Dick, as he now wanted to be known, attended his local primary school. At primary school he was teased because of his strange accent and slight speech impediment. At first he did well, but gradually fell away - academically and physically. By the time he entered the 'Academy' he was, by his own admission *'A bit of a toe rag'*. Showing off and doing outrageous things to impress the girls was his favourite pastime. School was crap.

Andy and Mary got divorced with the adolescent Richard staying with his long-suffering mum. His contact with his father ended abruptly with his father's death. School became something to be even more avoided. Running around with older, wilder, boys he wandered into petty crime. Car theft, vandalism, under-age drinking and booby trapping garden huts….and that was just one weekend alone!! Court appearances became a regular occurrence - always ending in a larger and larger fine. To Dick they were badges of manhood - to wiser heads they were signals of doom.

Work - official and unofficial - was easy to come by. Realising that all was not quite well with his self he saved hard and went to India. Something he felt he always wanted to do. Adventure after adventure was experienced. One experience in particular made him decide to return to Scotland and go to College. As love would have it, he also during this time got married and had two children. Because he hadn't done well at school he was at first a bit scared but gradually gained self-confidence and successfully passed national certificates, then Highers, then an HNC and then went onto University. He now has two degrees and is looking for suitable employment.'

i. Identify the developmental period illustrated above.

ii. What marker events have had a negative influence on Richard's life?

iii What particularly influenced Richard's adolescent development? Why?

iv. What would Erikson say Richard was trying to do when he went to India?

v. What marker events have had a positive influence on Richard's life?

vi. Where in Richard's life *must* scaffolding have taken place? What evidence do you have for this? Why should Richard be grateful?

vii. What recent part of his life should Richard examine to help enhance his job prospects? What important social factor has Richard experienced during this time which could prove invaluable in putting him in touch with employers who might use his qualifications; skills and undoubted abilities?

OUTCOME 2

INFORMATION

For this outcome you will learn about **two** research methods from the following; their characteristics and their applications as used by developmental psychology:

- experimental
- survey
- interview
- observation
- case study.

By the end of this outcome you should know and understand what two of these research methods involve and be able to identify and describe each as applied within developmental psychology research.

RESEARCH METHODS IN DEVELOPMENTAL PSYCHOLOGY: INTRODUCTION

All psychological knowledge is based upon evidence that is gathered by psychologists in a variety of ways. Students need to develop basic knowledge about methods and techniques used by psychologists in their research. It is intended in '*research methods*' to establish the foundations of critical understanding in relation to psychological evidence and to distinguish this from 'common sense' opinion which explains human behaviour mainly in terms of subjective and idiosyncratic assumptions and preconceptions. Common to Intermediate 1 and 2 developmental psychology these methods are:

a) The experimental method

- purpose of the experimental method
- main characteristics of the experimental method – cause/effect, control, variables independent and dependent
- types of experiment – laboratory, field, naturalistic, quasi-experiment

b) The survey method

- purpose of the survey method
- main characteristics of the survey method – questionnaires (open/closed questions),
- representativeness, response bias, standardised design
- types of survey – large scale, small scale, attitude/opinion measurement, rating scales

c) The interview method

- purpose of the interview method
- main characteristics of the interview method – detailed information, personal
- opinions/views, individualised design
- types of interviews – personal structured, personal unstructured

d) The observational method

- purpose of the observational method
- main characteristics of the observational method – objectivity, standardised recording using checklists, detail, accuracy, interactive (for participant observation)
- types of observational methods – participant observation and non–participant (direct) observation

e) The case study method

- purpose of the case study method
- main characteristics of the case study method – individualised, detailed, personalised, often retrospective,
- types of case study – individual, small group

Much of the above has already been introduced in 'Psychology: An Introduction'. Research methods are further extended in other optional units e.g. cognitive psychology; social psychology etc. This unit will not reinvent the wheel! An overview of research methods will be given and two particular research methods should be emphasised i.e. ***survey*** and the ***interview.***

Ethics in Psychological Research
Based on the British Psychological Society (BPS) Ethical Guidelines and Code of Conduct 1985.

1. **General considerations:** especially as much developmental psychology investigates children and young people always ensure that the research you do is done from the standpoint of the participants taking part. Research should never be offensive to anyone. This means that you should do nothing that threatens a persons' health, well-being, or dignity. You should also be aware that we live in a multi-cultural country of diverse ethnic communities. Research should be considered from a socially inclusive, non-sexist, anti-racist and non-ageist perspective.

2. **Consent:** wherever possible consent should always be got from participants.

3. **Deception:** deception is not allowed if participants would be unlikely to co-operate in it's absence. If in doubt the researcher should seek advice from a teacher, lecturer etc.

4. **Debriefing:** any research should provide participants with an opportunity to discuss the outcomes of it. This is called ***debriefing***, and allows discussion of the specific purpose of the research; interpretation of the participants particular performance, scores, answers etc, and give them an opportunity to ask questions.

5. **Withdrawal from the investigation:** all participants should give their permission to take part in your research. They should also be allowed to withdraw at any time if they so wish.

6. **Confidentiality:** unless subject to Scots law and UK statute e.g. the Data Protection Act confidentiality between participant and researcher should be observed at all times. If in doubt seek advice from your teacher, lecturer etc.

7. **Protection of participants:** all participants in a piece of research should be protected from any physical or mental harm.

8. **Observational research:** any observation should observe the privacy and psychological well being of those studied. If consent to be observed is not possible, observations should only occur where it would be normal that those observed would/could be by others. If in doubt consult your teacher or lecturer.

9. **Giving psychological advice:** sometimes during research, the researcher will be asked their advice concerning a psychological matter that is of concern to a participant. The golden rule is not to give advice if not qualified to do so. If in any doubt you should seek advice from your teacher or lecturer.

10. **Colleagues:** all of us who study psychology share the above set of ethical principles. It is our duty to encourage others who do psychological research to observe these ethical guidelines at all times.

Research methods: A brief resume

In *Psychology: An Introduction* we discovered that psychologists use five main types of research methods. These are:

- the experiment
- survey
- interview
- observation
- case study.

The purpose of research is to generate and discover evidence about any relationship between, or probable cause of, psychological phenomena. *Research methods* give us a systematic set of investigative tools to allow us to do this. Developmental psychology does not favour one particular type of research method over another. Experiments, surveys, interviews, observations and case studies have *all* given developmental psychology valuable information about the relationships between, and causes and effects of physical, cognitive, social and emotional development during and across the human lifespan.

What should be emphasised is that developmental psychology is particularly interested in the relationships between and, causes and effects of age differences or age changes *throughout* our lifetime. Finding the appropriate research method that can be used within and across differing age groups can be problematic. For example, a toddler could not complete a survey, a primary school child would have difficulty with the same interview questions given to his/her mum.

With this in mind researchers in developmental psychology should do their utmost to match the most appropriate research method to the concept and age group to be studied. Further, as far as possible and if appropriate, the same research tool should be used with the different age groups investigated. This would mean for example that if surveys or interviews were to be used that they consisted of language the differing age groups understood and found meaningful. Often the language has to be changed. Keeping this consistent with an eye to the concept under investigation is not an easy task. The challenge in developmental research is to come up with innovative research strategies complementary, applicable and valid at all age-stages of interest to us.

All you want to know about: The experiment

- An **experiment** involves the ***manipulation of an independent variable*** **(IV) so that we can** ***measure or observe the effect this has on a dependent variable*** **(DV).**

- An experiment will observe **the experimental method** which is ***characterised by*** the establishment of a ***cause and effect relationship*** between an independent and dependent variable; the ability of the researcher to ***control*** *the environment* where the experiment is being conducted and his/her awareness and adeptness to anticipate and **control** ***variables*** not relevant to the experiment.

- Experiments are of **three main types,** ***laboratory, field*** and ***quasi-experiment.*** The *difference* between the three is the *location* and thus the amount of *control* the researcher has over variables.

- The **laboratory experiment** sees the *manipulation of an independent variable and measurement/observation of the dependent variable* and takes place in a *closed heavily controlled setting.*

- The **field experiment** also sees the *manipulation of an IV* and *measurement/observation of the DV* but takes place *outwith the laboratory,* indoors or out.

- The **quasi-experiment** also occurs away from the laboratory but here there is *no manipulation of any independent variable* as the IV is already 'in place'. *Measurement/observation of a DV* does however follow. An example of a quasi-experiment would be where a psychologist was interested in finding out if there was a relationship (correlation) between speeding restrictions and road traffic accidents in two adjacent countries who were similar in all other respects apart from the legal driving speeds allowed. The independent variable - speed limits - is already in place and out of the control of the experimenter.

- **Variables** are things that can creep into an experiment and *give rise to alternative explanations* for a cause/effect relationship or correlation. These nuisance or *extraneous variables* (coming from outside) are of *two main types - confounding and random. Confounding variables can be controlled* with careful thought. *Random variables cannot be controlled.*

- The **experiment** has **advantages** of ***better cause and effect evidence*** in the form of factual, or empirical, data: ***precision measurement*** and ***control*** over extraneous variables.

- **Disadvantages** associated with the **experiment** are that they can often ***lack ecological validity*** (are not 'real' compared with normal, everyday behaviour); participants, and the experiment can suffer from what are called ***demand characteristics*** (participants behaviour is not consistent with their behaviour in everyday life because they realise that they are taking part in an experiment).

- Confusingly a **natural experiment** is often included under the heading of the 'experiment' in psychology. In a natural experiment the researcher usually *observes an animal or human in their natural environment*. *There is no manipulation of an independent variable in a natural experiment*. The researcher does not, and cannot, have one. A hungry lion in the South African *veldt* is not known for its co-operation with psychologists!

- Ethics aside, a *laboratory experiment* might be used, for example, in *Lifespan development* to investigate whether it is possible to *selectively breed* a particular *trait or ability into an animal*.

- Alternatively, *natural experiments* might be used in *Attachment and Separation* to investigate different types of *parent-child interaction* as they influence *sociability*.

- A *field experiment* would possibly be appropriate to a confirmation of *Piaget's theory of cognitive development* in children.

- We could use a *quasi-experiment* to investigate the effect *social learning* has on *aggression* shown by children in social situations.

- We might also use a *natural experiment* to look at the *effects* of marker or *critical life events* as they effect the development of *personality* in *Adolescence and adulthood.*

- Finally, a *laboratory experiment* would be very appropriate if as a developmental psychologist you wanted to investigate changing *cognitive abilities* like perception; attention; language; memory and thinking as a result of the *ageing* process.

All you want to know about: The survey

- A **survey** is a technique where researchers give ***the same written questionnaire to a sample of people to find out information about their thoughts, feelings and behaviours*** regards a variety of diverse attitudes and opinions.

- A good **survey** will be ***designed well*** in that it will be *characterised* by those surveyed being given the same easily understood set of instructions (***standardised instructions***): it will also have carefully worded (***standardised***) open and closed ***questions*** which are ***randomly presented*** in the survey itself (this stops some respondents filling in the survey with the answers they think the questioner wants as opposed to how they themselves think, feel and behave). The survey will be given to a reasonable ***representative sample*** of the desired population upon which the researcher wishes to draw conclusions i.e. it would be impossible to anticipate the future voting intentions of the Scottish people if only a representative sample of people from the town of Kilmarnock was surveyed. You would only be able to anticipate how the Kilmarnock Westminster MP or Scottish Parliament MSP election result might turn out.

- An example of an ***open question*** in a survey would be '*What is the biggest problem facing Scotland today*?' If this was given to 100 different people you could get 100 different answers. Concluding what these 100 people have in common would be impossible. Open questions like this in a survey are to be avoided. They give you ***too much qualitative information*** with which you can do very little. To be of any value to the researcher data in a survey should be amenable to measurement. It should be quantifiable.

- How you can get measurable answers to questions in a survey is to use what are called '***closed questions***'. Closed questions are questions that offer ***only one choice of response*** for the participant. They would include questions on what sex you are, male/female; what age you are etc. Questions like this often appear at the beginning of surveys and give the researcher valuable quantitative information as regards how many men and women took part in the survey, what age they were, what postcode district they lived in etc. Where closed questions fall down is when used to try and get quality detailed answers to complex questions. If you consider the closed question '*The biggest problem facing Scotland today is the state of Premier League football: Yes/No*' you are *forcing* people to make a *choice* whether or not they think that football *is* the biggest problem and you also do not allow people who genuinely '*do not know*' to respond thus. You can add up and measure yes/no answers to questions, but if the question does not really apply to peoples actual thoughts, feelings and behaviours then what you get is meaningless.

- One way round the problem of generating quality answers to restrictive closed questions is to use what is called a **Likert Scale**. This is named after ***Renais Likert*** who designed it's use at the University of Michigan Institute for Social Research in the 1960s. It is often used in the body of surveys today and is recognisable when you are asked to indicate your ***strength of feeling*** *about a particular issue on a* ***rating scale***. Taking the above question '*The biggest problem facing Scotland today is the state of Premier League football*' you would indicate strength of feeling on the matter by circling 1 2 3 4 or 5 on a rating scale.

Circling *5* would mean you *strongly agree*; circling *4 agree*; circling *3 don't know*; *2 disagree* and *1 strongly disagree*. This would allow other questions on unemployment, homelessness; education; the National Health Service etc. to be asked and answered elsewhere.

- At the end of the day the researcher can generate statistical measurements of peoples attitudes and opinions on a range of issues which they feel are important in the Scotland of 2000 and beyond. The use of Likert scales of measurement in surveys as a means of yielding both qualitative *and* quantitative data is relatively obvious and widespread.

- In order to avoid what is called **response bias** (people putting down the answers *they* think *you* want; or putting down an answer in response to a trigger in the question i.e. *Don't you agree that*..?) a number of strategies should be adopted. You should first do a ***pilot survey*** e.g. given the draft survey to a number of people whose job it is to pick faults in it's construction. Once you have sorted out anomalies and ambiguities you should ***randomly allocate your questions*** in the final draft. Make Question 1 question 14, question 2 question 7 etc.

- The **advantages** of surveys are that ***large amounts of information*** can be got in a short space of time; they are ***cheap*** and they can form ***good solid ground*** for future research.

- The **disadvantages** are that you ***cannot draw any cause and effect conclusions*** from a survey; poor construction suffers from *the '**GIGO**' effect* (garbage in garbage out) and limited and restrictive questions do not get interesting and creative answers.

- Longitudinal studies using the survey method have long been used by developmental psychology to get information about *changing attitudes* at different *age-stages* during *Lifespan development*. There is some evidence to suggest that attitudes in the teenage years are surprisingly consistent with those of their parents towards what is deemed important in life.

- *Questionnaires* on *childminding; the role of primary caretakers other than the mother; separation experiences* etc. would be most useful in an investigation into the relationship between *Attachment and separation* in infancy and childhood.

- A survey might be used to investigate *play opportunities* given to a group of pre-school children and relate the findings to experiments and/or observations on their *Cognitive development*.

- In an investigation into *social and moral development* a survey might be used to *measure people's attitudes* towards *right and wrong* as being formed by their *upbringing* or their *conscience.*

- In *Ageing* a survey would be useful in gathering data on any *depreciation in the quality of life* older people 'enjoy' as a result of physical infirmity or over-dependence on others.

Further useful examples of the survey in developmental psychology include:

- As regards the use of surveys to investigate development during *Adolescence and adulthood*, on 17 September 1999, *The Herald* published the results of a two-year longitudinal survey carried out by the MRC social and public health sciences unit at Glasgow University. The study is in the process of comparing answers to questions got from children in their last year of primary school (P7) in 1993-94 with answers got from them two years later when in their second year (S2) at 43 secondary schools. Those reporting feeling nervous, worried or anxious in P7 jumped from 40% to over 50% by S2. Those reporting feeling irritable and bad-tempered went from 40% to 48% over the two years. Those feeling sad and unhappy increased from 35% to 40%. The MRC concluded that these symptoms were indications of psychological ill health that appears to increase during adolescence.

  While inconclusive at present, *that being a teenager increases the likelihood of mental ill health in the medium to long-term*, the findings in this *pre- and post- test* survey scenario of puberty and the psychological effects of early adolescence do seem to indicate that a substantial number of teenagers in Scotland suffer from low self-esteem during their early teenage years.

- On 17 October 1999 the '*Sunday Herald*' reported on a survey by the Scottish Council for Research in Education, on behalf of Greater Glasgow Health Board, of all 570 pupils at Braidfield High School in Clydebank in '*one of the most socially deprived areas of Glasgow.*' Results suggest that there is little real evidence that teenage boys, who do not perform as well as girls in exams, do so because of problems associated with low self-esteem. Quite simply the better performing girls have *lower* self-esteem than the boys. The purpose of the survey was to try to establish if there was a causal link between levels of self-esteem and health issues such as smoking and under-age drinking. The initial findings of the study indicate it is girls who have more of a problem with their image than boys. In the study 16% of girls claimed they had felt '*sad or unhappy*' in the last month compared to 5% of the boys surveyed. Asked about self-image 37% of girls answered that there were '*lots of things I'd like to change about myself*' compared to 24% of boys.

  SCRE believes that the survey suggests '*there is no simple link between pupils' level of self-esteem and their likelihood of indulging in health risk behaviour such as smoking, drinking or taking drugs. Further study of the data is being undertaken to ascertain if pupils with low self-esteem are more prone to higher levels of anxiety. We have to ask if they worry more about school, careers, family and even their looks.*' Braidfield are applying the early findings to promote health awareness and associated academic standards. Headteacher, Gus MacDonald says, '*The life expectancy of my pupils is seven years less than those of pupils up the road. One of our major aims is to promote healthy living so we have to address the whole issue of self-esteem in our school. People who feel good about themselves tend to do better at school and tend to be good citizens.*'

All you want to know about: The interview

- The late Geoff Cooke, the much-respected Course Leader of the Postgraduate Diploma in Careers Guidance University of Strathclyde, often described an **interview** as a '*conversation with a purpose*'. The **interview** is a research technique where the researcher collects ***detailed information about individuals in a one-to-one (individualised) situation using oral questions.*** An interview is used across the range of key concepts in Developmental psychology often in tandem with a survey to supplement and extend knowledge about the person(s)/psychological issue under investigation. Interviews therefore yield qualitative, as opposed to quantitative, data primarily because of their free-ranging nature.

- There are many different **forms of 'interview'** used in psychological research and related occupational areas which fall into *two broad categories*: ***the personal structured interview*** known as a ***standardised interview*** and ***the personal unstructured interview*** known as a ***clinical interview***.

- A ***personal structured interview*** will have the researcher use *pre-planned, carefully constructed and pre-set questions.*

- ***Personal structured interviews*** - while done on a one-to-one (individualised) basis - are very often '***standardised***' in that *the <u>same</u> questions will be asked to different individuals*. Personal structured interviews are lengthy and are aimed at obtaining a detailed understanding of a persons mental processes and behaviours.

- A ***personal unstructured interview*** is a bit ***more informal*** in style. The interviewer will have some sort of aim or objective but there is little use of formal pre planned questions. The *discussion* between the researcher and interviewee is *more free ranging*. The questions asked really depend on the last answer given by the interviewee. An *example* of a personal unstructured interview - better known as a ***clinical interview*** - would be where *Jean Piaget* used it to discover different stages in childrens cognitive development (NB **Piaget's *Mountain Study*** as regards *egocentrism and decentering*).

- Whatever style of interview technique used the interviewer, researcher, psychologist or facilitator will have undergone lengthy training. A clinical psychologist, for example, will have studied for over 6 years completing undergraduate study in psychology and post-graduate study and supervision as a probationer clinical psychologist. Many careers officers in Scotland will also have studied and trained in interview techniques at postgraduate degree level in order that they give considered careers advice when interviewing young people and adults who wish their assistance.

- **Advantages** of the ***personal unstructured clinical interview*** are that they often give rise to ***spontaneous information*** that is very valuable in understanding the person being interviewed. ***Personal structured standardised interviews***, on the other hand, allow for ***generalisations*** to be made. Clinical ***interviews*** give a more realistic ***insight*** into the person being interviewed because of their more informal free-ranging nature in comparison to the more formal standardised interview.

- **Disadvantage** of the more informal ***personal unstructured clinical interview*** is that you ***cannot generalise*** your findings to a larger population. The ***personal structured standardised interview*** often ***restricts*** those interviewed to ***answers*** to questions asked. People tend to answer questions in an automatic and routine way. The ***interviewer*** in the more formal structured interview needs ***substantial training*** in order that the interview does not seem too awkward and uncomfortable for those taking part.

Further useful examples of the interview in developmental psychology include:

1. **Piaget's clinical interview** technique used to discover whether 4-year-old children had acquired the ***ability to conserve volume***. Equal amounts of liquid were placed in two cups of different shape and the child was asked which one they wanted and why. They invariably chose the tall thin glass over the short fat one. Piaget believed that this was because ***children as young as four could not conserve volume***. This means that they are cognitively unable to consider two aspects of an object at one and the same time. They could only take on board that the *tall thin glass looked bigger than the small fat one*. They were unable to work out at one and the same time that they both contained the same amount of liquid. With different children Piaget slightly varied the questions asked. This is a *good example of the less formal personal 'unstructured' interview* - often referred to as the clinical interview.

2. The **clinical interview** method was also used by **Sigmund Freud** the detail of which formed many of his case studies. *Believing that most of psychological problems lie in our unconscious Freud used connected, free ranging but focused oral questioning of his many patients to get to their specific fears and worries*. He believed these were to blame for their particular mental and behavioural problems e.g. hysterias or phobias. Once exposed, and connections made, Freud hoped his patients would have a greater understanding of why they were thinking or behaving in a dysfunctional way. As a consequence they could overcome their problem.

3. **Hodges and Tizard (1989)** used **interviews** and questionnaires in a ***longitudinal study*** over 12 years (from age 4 to 16) of ***institutionalised and ex-institutionalised children***. They wanted to discover what effects being institutionalised and/or being raised in a family environment had on cognitive, social and emotional development. ***They discovered that institutionalised children had more difficulty in forming attachments with others***. This affected their social and emotional development - important to forming lasting friendships, a loving relationship with another in adulthood, forming good workplace relationships etc. An inability to do this could see the individual pushed to the fringes of society. There is some evidence to suggest that an inability to form close, loving attachments with someone who loves, nourishes and cherishes us just for what we are in infancy and childhood can lead to a dysfunctional adult who is involved in criminal and anti-social behaviours.

All you want to know about: Observation

- **Observation** is the ***planned gathering of data* on *observed behaviour***.

- The **characteristics** of observation include an *in-depth approach* to allow us *to objectively record* observed *behaviours* of people using a *standardised* (planned and systematic) format e.g. time frames in a video or carefully designed *checklist.* This allows for the *accuracy and detail* needed to come to any firm conclusion about the reason for the observed behaviour.

- **Observations** often take place in people's homes, school, workplace or in specially arranged settings such as a laboratory testing or interview room. Observations can be one-off or *longitudinal* i.e. you *observe the same ability, skill or behaviour at different points in the participant's lifetime.*

- **Observation** is of *three main types*: *naturalistic; participant* and *non-participant*. *Naturalistic observation* (*observing in a natural setting* e.g. a nursery) is often used in developmental psychology when children are being studied. *Participant observation* sees the *researcher setting up the situation and then taking part in it. Non-participant observation* sees the *researcher setting up* the situation and then *recording* what happens *unobtrusively* using, for example, a two-way mirror. He or she would not take part as such.

- There is *no manipulation of an independent variable* in an observation and there are umpteen *extraneous variables* that can pollute even the best-planned observations.

- **Advantages** of the observational technique include *high ecological validity* (observed behaviour is more likely to be consistent with everyday life) and the spontaneous behaviour of those observed.

- **Disadvantages** of observation are that *no cause and effect connections* can be made; observations are *difficult to replicate* in order to confirm the original results and any observation *lacks control* from the point of view of the researcher. Observation is a popular research method in both social and developmental psychology. NB Tom **Bower's (1966) *peek-a-boo experiment*** and ***observation*** into ***size and shape constancy*** or **Gibson and Walk (1960) *experiment*** and ***observation*** into ***innate depth perception*** in infants using their famous '***visual cliff***''.

- As applied to key concepts in developmental psychology *a longitudinal observation* over a long period of time) could be used during *Lifespan development* to gather data on *different psychological abilities found in an individual at different times in their life.*

- A *naturalistic observation* of *mother-child interactions* might be useful to study *Attachment and separation* issues (**Ainsworth, 1967**; *Infancy in Uganda:* John Hopkins University Press: **Ainsworth *et al,* 1971**, *Individual differences in strange situation behaviour of one-year-olds* as reported in Shaffer, HR (ed) (1971) The Origins of Human Social Relations: London: Academic Press).

- *Laboratory-based observation* would be valuable to gather data on *childrens Cognitive development* e.g. Jean Piaget's use of participant and non-participant observation in his various discoveries concerning cognitive stage development in children *e.g. object permanence; egocentrism and decentering; conservation etc.*

- *A natural participant observation* of an aspect of s*ocial and moral development* would be when you manipulate a situation where children are faced with a *moral dilemma* e.g. compare and contrast observed behaviours when three groups of pre-, early, and late primary school children '*find*' something valuable which does not belong to them!

- If you wanted to study the effect of similar age peer relationships on personality as they differed between cultures during *Adolescence and adulthood, naturalistic observation* could and has been used (**Bronfenbrenner [1973]** *Two Worlds of Childhood: US and USSR.* New York: Pocket Books).

- *Naturalistic observation* would finally also be appropriate you were interested in confirming, or otherwise, the relationship between ageing and **Cumming and Henry (1961, 1975)** social disengagement theory, where they report from observations of the *Ageing* adult in retirement that they appear to *voluntarily* and gradually *let go* of previously important social involvement. They seem to be preparing for death.

Further useful examples of observation in developmental psychology include:

1. In **1965** the Canadian psychologist Alfred **Bandura** used non-participant observation in a laboratory setting. The **aim** of the observation was **to discover if aggression in children was influenced by them imitating and modelling themselves on adult behaviours**. Three groups of children were shown an adult being rewarded, unrewarded or punished for aggressive behaviour towards a Bobo doll (an interesting manipulation of an independent variable mostly only found within a laboratory or field experiment). ***Each child was then observed*** in an identical play environment with any resultant aggressive behaviour ***(the dependent variable) being recorded*** onto film and later carefully analysed, on a frame-by-frame, child-by-child basis. ***Bandura*** *concluded* that ***children*** do ***learn aggressive behaviours*** as a result of ***observing, imitating and modelling*** themselves on ***adults***.

2. Another example of non-participant observation is **Friedrich and Stein (1972)** non-participant observation where they randomly constructed three groups of pre-school children, each group being exposed to either violent, pro-social or neutral television viewing. The **aim** was **to discover whether the content of childrens television viewing influenced aggression**. After one month's viewing

Friedrich and Stein **observed** that the ***children in the violent programme group were significantly more aggressive than*** their pro-social and neutral viewing counterparts. An interesting side issue is that those who were initially more aggressive than the rest in the violent group seemed affected the most.

3. Participant observation was used by **Whyte** in **1943** when he joined an ***Italian street gang in Chicago***. He used a cover story that he was writing a book about the area. His true purpose was **to observe the gang from a psychological point of view**. He is remembered for his famous statement on his experiences: '*I began as a non-participating observer. As I became accepted into the community, I found myself becoming a non-observing participant.*'

All you want to know about: The case study

- A **case study** is an ***in-depth written investigation into an individual*** who has been found to be ***unique in some way***. They are normally conducted face-to-face with the individual or with individuals in a small group who share something in common.

- **Characteristics** of the case study are that they are *orientated towards the individual* concerned and as a consequence can *yield great personal detail*. The document your GP holds on you which contains all your medical details from birth is an everyday example of a case study.

- **Case studies** are of **two** main **types**: ***retrospective*** *and* ***longitudinal***. A *retrospective case study* is when the individual concerned is asked to *reflect on their past*. This type of case study is problematic in that the individual can be deliberately selective about what they reveal about themselves and often they lie into the bargain. Another type of case study is *the longitudinal case study*. This is where you study an individual in depth for a period of time *into the future* of at least one year. Details here are based upon the individuals future. Longitudinal case studies are difficult to manipulate from the point of view of the participant. A very good example of a visual longitudinal case study is the excellent BBC *7-Up* series which follows physical, cognitive, social and emotional development of a ***cross-sectional*** group of British babies all born within a particular week in 1955 as they journey through life.

- **Advantage** of the case study is that it can give *excellent in-depth information* about an individual and *treats all participants as individuals.*

- The **disadvantages** of the case study would be that it's *findings cannot be applied to everyone* (or *generalised to the whole population*). As a result the case study as a research tool *lacks scientific validity*.

- The case study within developmental psychology might be used during *Lifespan development* to investigate whether different cultures have different phases in the life span.

- The case study of a baby biography might be used to investigate the psychological effects of *Attachment and Separation*.

- A longitudinal case study would give valuable information about the c*ognitive development* of a small group of children at different ages in their lives.

- Retrospective case studies are often used by criminal justice personnel who are interested in s*ocial and moral development* (or absence of it) and why particular individuals commit crimes.

- *Adolescence and adulthood* might see developmental psychologists keep case study notes on a person's changing social network and the role it plays for them.

- Finally, a case study might be used to determine the psychological effects of being physically infirm as a consequence of *Ageing*. The famous psychologist BF Skinner, on hearing that he was suffering from a terminal illness bravely and remarkably kept a case study on himself in relation to *the* ultimate critical life event and the resulting physical, cognitive, social and emotional effects his illness had on him. He kept this up almost until death. Those with an interest in psychology in Scotland salute this endeavour.

STUDENT ACTIVITIES

Research methods in developmental psychology

Answer the following questions:

1.a) The experimental method:

What is the purpose of *the experimental method*? Identify and describe it's main characteristics. What do you understand by the laboratory, field, naturalistic, and quasi-experiment?

b) The survey method:

What is the purpose of *the survey method*? Identify and describe it's main characteristics. What sort of things in psychology do surveys measure? How can you measure these things in a survey?

c) The interview method:

What is the purpose of *the interview method*? What are its main characteristics? What do you understand by the terms *personal structured* and *personal unstructured* interview?

d) The observational method:

What is the purpose of *the observational method*? What are it's main characteristics? Describe participant observation and non–participant (direct) observation.

e) The case study method:

What is the purpose of *the case study method*? What are it's main characteristics? What is the difference between a retrospective and longitudinal case study?

2. Take each research method in turn. Describe <u>two</u> occasions where each method might or has been used to expand our knowledge of developmental psychology.

3. What do you think are the three most important ethical issues facing psychological research today?

The fun multiple-choice quiz

Circle the appropriate answer a, b, c or d. Good luck. Read the questions carefully!

1. What research method might best be described as *the manipulation of an independent variable (IV) so that we can measure or observe the effect this has on a dependent variable (DV).*
   a the survey
   b the interview
   c the experiment
   d the case study

2. What in psychology is characterised by a cause and effect relationship between an independent and dependent variable, control over the environment and the researcher's ability to control nuisance variables.
   a the experimental method
   b the observational method
   c the rhythm method
   d the interview method

3. What is the difference between a *laboratory; field;* and *quasi-experiment.*
   a location and expense
   b location and distance
   c location and the dependent variable
   d location and control

4. What research method might best be described as *the manipulation of an IV and measurement/observation of the DV but takes place outwith the laboratory, indoors or out.*
   a a quasi-experiment
   b a natural experiment
   c a field experiment
   d a genetic experiment

5. What research method might best be described where *there is no manipulation of any independent variable as the IV is already 'in place'. Measurement/observation of a DV does however follow.*
   a a natural experiment
   b a quasi-experiment
   c a crazy experiment
   d a laboratory experiment.

6. Extraneous variables are of two main types
   a confusing and compelling
   b regular and reliable
   c confounding and random
   d confounding and disconcerting

7. If we were to identify the following advantages and disadvantages connected with a particular research method which one would be describing? *It has advantages of better cause and effect evidence in the form of factual, or empirical, data and precision measurement and control over extraneous variables. Disadvantages associated with it's use are that they can often lack ecological validity (are not 'real' compared with normal, everyday behaviour), participants, and the experiment can suffer from what are called demand characteristics (participants behaviour is not consistent with their behaviour in everyday life because they realise that they are taking part in an experiment).*
   a the survey
   b the interview
   c the experiment
   d the case study

8. What research method would you employ if you wanted to investigate whether it is possible to *selectively breed* a particular *trait or ability into an animal.*
   a the survey
   b the interview
   c the experiment
   d the case study

9. What research method would you employ if you wanted to investigate the effect of different types of *parent-child interaction* as they influence *sociability*.
   a the observational method
   b the interview
   c the natural experiment
   d the case study

10. If you visited a nursery and reran Piaget's experiment into conservation, this would most likely be a
   a a field experiment
   b a laboratory experiment
   c a non-participant experiment
   d a quasi-experiment

11. Two nurseries are in the same catchment area. One nursery had just exposed their children to a social learning programme. The other has not. As a researcher you go into the nurseries to measure levels of aggression shown by the children. This is an
    a observational experiment
    b a natural experiment
    c a laboratory experiment
    d a quasi-experiment

12. If we found a tragedy common to a group of adolescents and wanted to discover what effects this had on their personality development this would be an example of a
    a observational experiment
    b a natural experiment
    c a laboratory experiment
    d a quasi-experiment

13. Unlucky for some! How would developmental psychologists investigate, measure and observe cognitive abilities like perception, attention, language, memory and thinking as a result of the *ageing* process, in a controlled environment.
    a laboratory experiments
    b case studies
    c observations
    d two-way mirrors

14. What do we call the technique where researchers give the same written questionnaire to a sample of people to find out information about their thoughts, feelings and behaviours.
    a the interview
    b the survey
    c the experiment
    d the case study

15. Considering the characteristics of a good survey what is the odd one out below
    a standardised instructions
    b open and closed questions
    c representative sample
    d individualised design

16. What is this an example of: '*What is the biggest problem facing Scotland today*?'
    a a closed question
    b a complex question
    c a stupid question
    d a open question

17. How does a survey gather *quantifiable* data?
    a from incomplete questionnaires
    b from the use of closed questions
    c from the use of open questions
    d from telephone enquiries

18. A method to generate quality answers to restrictive closed questions was developed by
    a Keegan at Kilmarnock College
    b Wison at Glasgow University
    c Eysenck at the University of London
    d Likert at the University of Michigan

19. How do you avoid response bias in a survey
    a throw it in the bin
    b do a pilot survey
    c help the person fill it in
    d use the semantic differential rating scale

20. What might be the best method of research to get information about *changing attitudes* at different *age-stages* during *Lifespan development*
    a a longitudinal and cross-sectional survey
    b a longitudinal and cross-sectional observation
    c a non-participant case study
    d a participant quasi experiment

21. What might you give adults which would be most useful in an investigation into the relationship between *Attachment and Separation* in infancy and childhood, if you wanted information on childminding; the role of primary caretakers other than the mother, separation experiences etc
    a a holiday
    b an personal unstructured interview
    c a laboratory experiment
    d a questionnaire

22. If you wanted to look at *play opportunities* given to a group of pre-school children and relate the findings to experiments and/or observations on their *Cognitive development* you may use
    a a questionnaire and survey
    b a case study and quasi-experiment
    c a non-participant observation and interview
    d a laboratory experiment and introspection

23. What would be a useful tool in an investigation into social and moral development to measure people's attitudes towards right and wrong as being formed by their upbringing or their conscience
    a an personal unstructured interview
    b a retrospective case study
    c a questionnaire and large scale survey
    d a personal structured interview and longitudinal case study

24. In *Ageing* what research method would be useful in gathering data on any *depreciation in the quality of life* older people 'enjoy' as a result of physical infirmity or over-dependence on others.
    a a laboratory experiment
    b a survey
    c a case study
    d a observation

25. What is a 'conversation with a purpose'?
    A gossip
    b rumour
    c scandal
    d interview

26. What research method is best described as *detailed information about individuals in a one-to-one (individualised) situation using oral questions.*
    a the case study
    b the experiment
    c the quasi-experiment
    d the interview

27. The *personal structured interview* is to the *standardised interview* as *the personal unstructured interview* is to
    a the clinical interview
    b the guidance interview
    c the careers interview
    d the police interview.

28. The *personal structured interview* will have the researcher use
    a unplanned, poorly constructed and pre-set questions
    b post-planned carefully constructed and badly set questions
    c pre-planned, carefully constructed and pre-set questions
    d unplanned, poorly constructed and pre-set questions

29. If a personal structured interview was done on a one-to-one (individualised) basis where the *same* questions were be asked to different individuals. This type of interview would be said to be
    a costly
    b standardised
    c formalised
    d caramelised

30. What type of interview method did Piaget use in his famous Mountain experiment into egocentrism and decentering?
    a careers
    b guidance
    c humanistic
    d clinical

31. No matter what type of research you use you should have always undergone a certain amount of
    a assessments
    b assignments
    c training
    d education

32. The personal unstructured interview gives rise to spontaneous information while the personal structured standardised interview give rise to
    a generalisations
    b problems
    c specifics
    d expense

33. With the personal unstructured clinical interview you cannot generalise your findings to a larger population. The personal structured standardised interview similarly
    a allows people to answer in a free-ranging way
    b restricts those interviewed to answers to questions asked
    c reserves peoples opinion on the issue in question
    d restricts you to when you can have a break

34. What three psychologists all used an interview technique in their research?
    a Bandura Walters and Freud
    b Festinger Carlsmith and Eysenck
    c Osgood Tannenbaum and Esterton
    d Hodges Tizard and Piaget

35. With what research methods are the following characteristics associated? *The planned gathering of data on observed behaviour taking an in-depth approach to allow us to objectively record observed behaviours of people using a standardised format.*
    a the interview
    b observation
    c the laboratory experiment
    d the case study

36. How might a non-participant observation record data
    a on the back of a cigarette packet
    b verbally between participant and researcher
    c use a carefully designed video time frame or standardised checklist
    d writing results up on the chalk board

37. If you observed *the same ability, skill or behaviour at different points in the participants lifetime* this would be a
    a longitudinal observation
    b latitudinal observation
    c longitudinal survey
    d latitudinal survey

38. Observation is of which of the following three types
    a naturalistic; participant and non-participant
    b spontaneous; participant and individualised
    c particular; peculiar and problematic
    d quasi-; non-participant and experimental

39. Which of the following statements is true about an observations
    a they don't take place during bad weather
    b there is manipulation of the independent variable
    c there is manipulation of the dependent variable
    d there is no manipulation of the independent variable

40. In the observational method *high ecological validity* is to *no cause and effect relationship* as *spontaneous behaviour* is to
    a difficult to replicate
    b difficult to anticipate
    c difficult to predict
    d difficult to manipulate

41. What might be used over a long period of time during *Lifespan development* to gather data on different psychological abilities found in an individual at different times in their life.
    a a laboratory experiment
    b an interview
    c a quasi-experiment
    d a longitudinal observation

42. Mary Ainsworth used *what* to investigate the connection between mother-child interactions and *Attachment and separation*
    a a naturalistic observation
    b a controlled laboratory experiment
    c a cross-sectional observation
    d a participant case study

43. Jean Piaget used which two strategies to help in his various discoveries concerning *Cognitive development* in children e.g. object permanence, egocentrism and decentering; conservation etc
    a quasi experiments and survey
    b participant and non-participant observation
    c naturalistic observation and natural experiment
    d retrospective and longitudinal case study

44. Bronfenbrenner (1973) used which technique to compare and contrast socialisation and *Social and moral development* between US and USSR teenagers
    a the laboratory experiment
    b naturalistic observation
    c telephone enquiries
    d parental interviews

45. The following psychologists have all used the observational method to generate knowledge concerning developmental psychology
    a Bandura Friedrich and Stein
    b Bandana Friedman and Smith
    c Whyte; Black and Greene
    d Freud, Pavlov and Keegan

46. What is an in-depth written investigation into an individual who has been found to be unique in some way?
    a a laboratory experiment
    b an observation
    c a quasi-experiment
    d a case study

47. Identify two types of case study
    a longitudinal and retrospective
    b latitudinal and regressive
    c participant and non-participant
    d naturalistic and clinical

48. If you conducted a long-term case study into a sample of individuals all born on the 16th December 1955 this type of case study would be
    a latitudinal
    b retrospective
    c retroactive
    d cross-sectional

49. *Excellent in-depth information* is to *lacks scientific validity* as *treats all participants as individuals* is to
    a *findings cannot be applied to everyone*
    b findings can be applied to everyone
    c everyone wants to know the findings
    d findings are read by everyone

50. Dr John Bowlby conducted retrospective case studies to investigate
    a Social and moral development
    b Cognitive psychology
    c The Lifespan approach
    d Attachment and separation

51. The case study method of research was most used by
    a Pavlov
    b Freud
    c Darwin
    d Piaget

The fun multiple-choice quiz answers

1 *c* *the experiment*
2 *a* *the experimental method*
3 *d* *location and control*
4 *c* *a field experiment*
5 *b* *a quasi-experiment*
6 c *confounding and random*
7 c *the experiment*
8 *c* *the experiment*
9 *c* *the natural experiment*
10 *a* *a field experiment*
11 *d* *a quasi-experiment*
12 *b* *a natural experiment*
13 *a* *laboratory experiments*
14 *a* *the interview*
5 *d* *individualised design*
16 *d* *an open question*
17 *b* *from the use of closed questions*
18 *d* *a Frenchman called Likert*
19 *b* *do a pilot survey*
20 *a* *a longitudinal and cross-sectional survey*
21 *d* *a questionnaire*
22 *a* *a questionnaire and survey*
23 *c* *a questionnaire and large scale survey*
24 b *a survey*
25 *d* *interview*
26 *d* *the interview*
27 *a* *the clinical interview*
28 *c* *pre-planned, carefully constructed and pre-set questions*
29 *b* *standardised*
30 *d* *clinical*
31 *c* *training*
32 *a* *generalisations*
33 *b* *restricts those interviewed to answers to questions asked*
34 *d* *Hodges Tizard and Piaget*
35 b *observation*
36 *c* *use a carefully designed video time frame or standardised checklist*
37 *a* *longitudinal observation*
38 *a* *naturalistic; participant and non-participant*
39 *d* *there is no manipulation of the independent variable*
40 *a* *difficult to replicate*
41 d *a longitudinal observation*
42 *a* *a naturalistic observation*
43 *b* *participant and non-participant observation*
44 *b* *naturalistic observation*
45 a *Bandura Friedrich and Stein*
46 *d* *a case study*
46 *a* *longitudinal and retrospective*

47 *d* *cross-sectional*
48 a *findings cannot be applied to everyone*
49 *d* *Attachment and separation*
50 *b* *Freud*

How did you do? Will you make the same errors again?

Shooting Star: 45-50

Rising Star: 35-45

Distant Star: 20-35

Imploding Star: 10-20

Dark Star: 0-10

GENERAL REFERENCES

Mike Cardwell *The Complete A-Z Psychology Handbook* 1998 Hodder and Stoughton

Andrew Clark and Richard Layard *Studies in the UK Economy UK Unemployment* 1990 Heinemann Educational

Collins *Dictionary and Thesaurus* 1992 Collins

Hugh Coolican *Research Methods and Statistics in Psychology* 1990 Hodder and Stoughton

Richard D Gross *Psychology - The Science of Mind and Behaviour* 3rd ed 1997 Hodder and Stoughton

Richard D Gross *Key Studies in Psychology* 2nd ed. 1994 Hodder and Stoughton
Nicky Hayes *A First Course in Psychology* 3rd ed. 1984 Nelson

Nicky Hayes *Foundations in Psychology* 2nd ed. 1998 ITP

Gerard Keegan '*Psychology at Kilmarnock College*: *Notes and Materials*' 5th ed. 1999 Kilmarnock College

Rob McIlveen and Richard Gross *Developmental Psychology* 1997 Hodder and Stoughton